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## EDITORIAL COMMENT

### Fiddlers vs. Pillow Pushers

"IF YOU can't lick 'em, jine 'em," advised the sagacious Mark Twain, a suggestion which might have some application to the unrealistic, illogical and unpredictable National Labor Relations Board.

As long as industry looks on NLRB as the work of the devil, and makes no effort to insist that this powerful government agency be at least partially staffed with people who have some concept of the problems of management, industry will continue to get the silly treatment that has been dealt out in the Pacific Coast cannery strike situation.

The history of the case is ridiculous, although to a grower or canner about to lose a valuable crop through the muddling of a government agency it is tragedy.

AFL had been the bargaining agent in the California canneries under an agreement expiring March 1, 1946. Last September, disregarding the usual practice of waiting until 30 days before the expiration of an agreement to hold an election to determine the future bargaining agent, the NLRB called for an election in October, when cannery employment was at a low point.

CIO won the election by a narrow margin, but AFL protested the validity of the contest and after a hearing at Washington NLRB set aside the election.

But NLRB added to its opinion a statement that the employers would have to deal with both unions pending a new election. This was not only asinine policy, but exceedingly poor law, for in the first place an opinion cannot be made part of the text of an order, and in the second place the voiding of an action should automatically mean restoration of the previous status of things. In view of the resulting uncertainty, the California Processors and Growers refused to renew their expiring agreement with AFL, whereupon AFL proceeded to turn on the heat by having its teamsters refuse to deliver any crops to canneries where the CIO unions were in control.

To add the crowning touch of silliness, the administration at Washington tried to toss the mess into the lap of Governor Warren of California by calling it a purely local matter which the state authorities should settle. Governor Warren very properly tossed it right back with the reminder that NLRB had already assumed jurisdiction.

Actually, what better example could industry find to present to Congress or the Department of Labor in justification of the necessity for a better staffing of NLRB than this cannery case. Under the present train of NLRB reasoning, crops must rot, farmers suffer and food production be forbidden in the face of an approaching world famine, while the technicality of selecting the proper collective bargaining agent is being threshed out. In other words, NLRB fiddles while Rome burns.

But if industry in the West looks on this situation as merely a cannery case, instead of the occasion for a thunderous and united demand by all industry on Washington for a change in the NLRB set-up, it can rightfully be accused of rolling over in bed and pushing a pillow over its ear to drown out the loud knocking of opportunity at the door.

### We Stand Corrected

THE April issue of *Western Industry* said that Paul McNutt never visited the West Coast while War Manpower Director. This statement is incorrect as Mr. McNutt finally did come to the Pacific Coast in May 1945.

# WESTERN INDUSTRY

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### OUR COVER PICTURE

As rapidly as in war, the U. S. Rubber Company in its Los Angeles plant is now producing tire tubes for a West at peace.

A. C. PRENDERGAST, Editor  
S. S. MORRILL, Assistant Editor

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# Spotlight

## on the NEWS

**WESTERN INDUSTRY**  
**FOR MAY, 1946**

VOLUME XI

NUMBER 5

**P**ROBABLY no one cares in the least to hear *Western Industry's* private troubles about having seven or eight galleys of type already set for the "West on Its Way" section of the magazine, when there is only room for four or five.

Probably still less is anyone interested in the fact that on one editorial desk is a stack of releases, notes and clippings, all untouched, and on another a couple of notebooks full of untranscribed reports. Why should anyone outside our editorial offices be concerned?

But to us who work at these desks it is a disturbing situation, because this very lack of space prevents *Western Industry* giving its readers a true picture of the Western postwar development already under way or definitely scheduled.

Unsympathetic readers may ask, "Why not use a little more paper and do your job right?" The answer is, in the first place, that paper is a scarce article these days, and second, that the diversified needs of our readers preclude devoting much more space to this particular form of editorial service under any conditions.

As a matter of fact, our readers do get the cream of the development news, between the West on Its Way section and the main editorial pages of the magazine. Nevertheless, people really live on milk rather than on cream, so the reader who scans *Western Industry* and says "So that's all that's happening in the West; it still isn't much of a market," sees only the larger industrial projects and misses the multitude of smaller matters of equal or perhaps even greater significance in the aggregate.

### **In the Realm of Figures**

Because there seem to be far more worth-while industrial projects in the West than *Western Industry* seems to have space to mention, it is hard to get disturbed over unemployment forecasts. To be sure, the United States Employment Service reports that unemployment in the three coast states, Arizona and Nevada, reached 685,000 by

April 1, an increase of 575,000 since V-J Day, but if it is anything serious, no one seems to be able to point out any distress or suffering.

Ray Hunter, regional U.S.E.S. director, believes the unemployment will increase for several months, but employment will pick up at the same time. U.S.E.S. has a program of "job development campaigns" to make absorption of the job-hunters a quicker process. Seattle, Spokane, Portland, Salem, Bend, Sacramento, Fresno, Modesto, San Rafael, Alameda, Berkeley, San Bernardino, Riverside, Long Beach, Los Angeles, Reno and Las Vegas are some of the Western cities engaged in such programs.

### **Recognizing Our Own Identity**

When the flooding of the West with people and plants intently concerned with war production awoke in the West a consciousness of itself as an economic unit, there came a realization of the need for unified thought and action to safeguard the West's postwar progress, manifested in many ways.

But since V-J Day there has been an almost appalling subsidence of this realization and consciousness, as each locality buckled down to its own immediate problems. Yet the opening of the Geneva steel mill bids by War Assets Corporation on May 1 is very likely indeed to cause a new awakening, since it apparently will precipitate a fight for a Western basing point on steel prices.

One of the principal provisions of the Surplus Property Administration's report to Congress last October is that, in addition to the bid price, consideration will be given to "the proposed pricing policy of the bidder. The disposal agency will consider the prospects of lower steel prices to steel users as a primary test of effective independent competition under the act." Accordingly, the government is requiring bidders to submit statements as to pricing policy, together with plans, if any, for the establishment of basing point prices.

Score one for the Western States Council, through its steel committee, in getting this point over. The committee has insisted that in the disposition of Geneva or adjustment of any government loan on Fontana, the operator must be committed to a policy of pricing the products of the mill on the basis of cost of production, plus a fair profit, in lieu of the past practice of using an eastern basing point price plus freight.

The Council is going to have some people on hand at Washington when the bids are opened to fight the battle through, and no doubt the Western members of Congress will be called into consultation. Perhaps the millions of words already spoken and written over the Western steel question will only be the square root of those yet to come. But whatever the outcome, if the West's consciousness of its natural existence as an economic unit is thereby firmly fixed, the words will not have been spilled in vain.

### **Infant Western Spokesman**

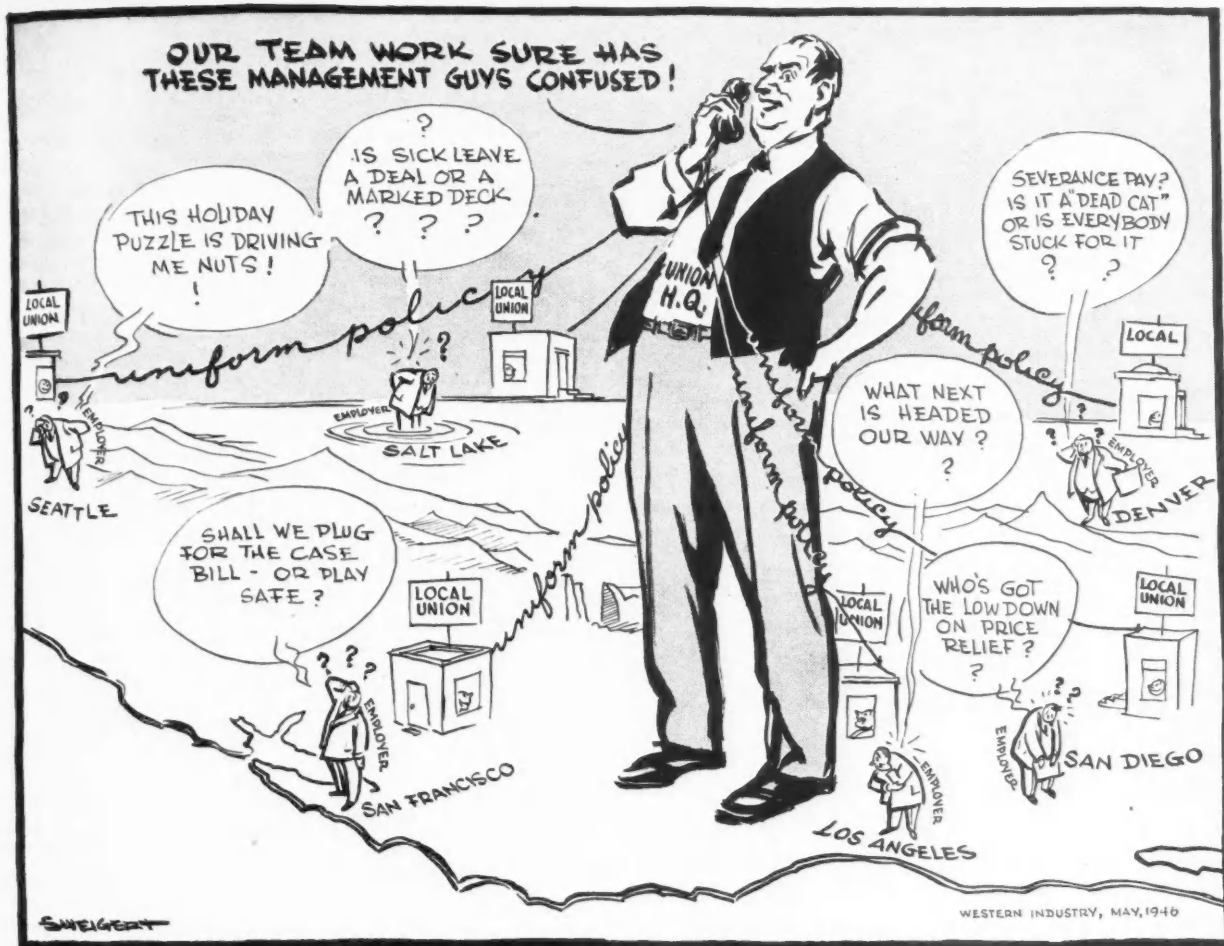
What holds the West together, anyhow, when the various parts of it hardly know they belong together? Is there one clearing-house of ideas, one organization through which the entire West can pull together? Until the war came on, never had the coast and mountain states been united, except possibly on a temporary basis in an emergency.

Actually, even now there is no organization yet recognized as spokesman for the West, although there is one coming along in a modest way. So slowly is it coming that impatient critics fret when its name is mentioned, and still more will they probably fret when they hear that its policy, for the next year at least, will be to steer clear of controversial questions and center on less important matters on which unity exists.

We refer to the *Western States Council*, an organization of the chambers of commerce in the eleven Western states. It jumped into the limelight with its steel



## Western Industry In Pictures . . . . . Negotiating In The Dark



conference at Salt Lake City in February, 1945, and its subsequent efforts to steer a course on steel. On light metals, however, there was nowhere as much unanimity of thought . . . in fact, the steel question was full of disagreements at times. And so the Council is prepared to take things more slowly and carefully, although no one knows what important jobs may fall to its lot for prompt and vigorous handling, simply because it is the only all-Western organization.

### Slower and Surer

Ed Kent of Mor-Pak Preserving Corporation, Stockton, California, predicted at the recent Northern California Management Conference that future development will be a slow, steady affair, rather than any overnight transformation. One of his reasons was that English and eastern venture capital, which built the railroads and other pioneering enterprises of the West in the hope of getting big returns on long chances, is no longer available.

A plea for venture capital, however, was recently posed by W. B. Greeley, chairman of American Forest Products, Inc. He said

it would be possible to industrialize the Pacific Northwest within 15 to 25 years with forest products industries, but, it would take the daring capital and management which is willing to face the facts to take advantage of the opportunities. It seems as though the government is the one that puts up all the venture capital and takes the long chances these days. It doesn't have to bother with profits reports to insistent stockholders.

The Pacific Northwest will be busily occupied from now on in transforming its lumber industry into a sustained yield proposition, cutting less and utilizing more. After all, isn't that what we are heading into in every direction, using more and wasting less.

### Aluminum Derby

When the cartoonist had one of the characters in the "Aluminum Derby" cartoon in the April issue of *Western Industry* saying "I told you this would be a dilly," he was not far off.

There are now three fully integrated producers of aluminum, as the result of

War Assets Corporation awarding a lease on the alumina plant at Baton Rouge, Louisiana, to Henry Kaiser. Reynolds Metal Company became integrated when they were given a lease on the Hurricane Creek alumina plant in Arkansas.

Both Kaiser and American Smelting & Refining Company were interested in getting the Troutdale, Oregon, reduction works, but WAC has leased this to Reynolds. This step greatly increases Reynolds' capacity in the Northwest and may hasten the day when Reynolds will establish an alumina plant at tidewater in the Pacific Northwest.

The cartoonist also hit the nail on the head when he had American Smelting astride the Troutdale horse and saying, "We just came along for the ride," because the ride didn't last long, and ASRF may have to build plants if they want to get into the aluminum race. Of course, they could obtain the government's plant at Tacoma, but as the cartoon pictured Olin getting bucked off the Tacoma horse, it isn't likely that anyone will want the establishment.

## In Our Mail Box

### Shipshawed by Mistake

*Editor, Western Industry:*

The "Aluminum Derby" cartoon is clever and quite expressive. The artist is a bit off the beam, however, in attaching the Shipshaw label to the Alcoa horse. Some of the government planners have been quite insistent that the Canadian operations are still under the control of Alcoa, but the District Court, Southern District of New York, and the Chicago Circuit Court found otherwise.

C. S. THAYER  
Works Manager  
Vancouver, Washington, Works  
Aluminum Company of America.

*Editor, Western Industry:*

In view of your previous warning about your cartoon I was quite prepared to have Alcoa spend a busy time holding on to its hat with one hand and holding up its trousers with the other, while the shirt was being stolen off its back. However, my "imagineering" ability was not sufficient to foresee that your cartoonist, in doing such an excellent and interesting job as he has done, could have become so confused as to think that Alcoa could ride a Shipshaw horse.

I. W. WILSON  
Vice-President  
Aluminum Company of America.

### More About Geneva

*Editor, Western Industry:*

It has just come to my attention that your March issue carried a cartoon depicting various elements and groups interested in final disposition of the Geneva Steel plant in Utah. In at least one important detail, I can assure you the cartoon is so incongruous and in error as to be ludicrous.

Where your cartoonist has pictured me as a diamond-studded, gilt-edged "blue chip" holder with pretensions of affluence, standing in the same lofty financial position with Mr. Mario Giannini, he has strayed far afield and beyond the facts.

I am sending a copy of this letter to Mr. Giannini with the hope he will understand that I am in no way responsible, directly or indirectly, for the false interpretation the cartoon places on my interest in and concern over the ultimate fate of this important plant.

As a public relations man, as publisher of a weekly regional news letter, as chairman of the Democratic State Central Committee in Colorado, and as an individual zealously devoted to the tremendous development possibilities of the eleven western states, I did have an interview with

Mr. Giannini on how western interest could best be served in disposal of the plant.

I would have it clearly understood that at no time have I represented myself as qualified to participate in financing of the magnitude required in the Geneva problem.

My only hope and interest is that all sincere and progressive leaders in the economic development of the west will vigorously demand that Geneva be established on a sound, independent basis, free of eastern monopolies, free to serve the undeniable industrial destiny that lies ahead for these western states.

EUGENE CERVI  
Eugene Cervi and Associates  
Industrial and Public Relations  
Denver, Colorado.

(Editor's Note: *Forbes*, semi-monthly financial publication, lists Eugene Cervi as its western feature editor.)

*Editor, Western Industry:*

The cartoon appearing in your March issue of *Western Industry* is certainly a complete job, leaving no one out.

HANS A. KLAGSBRUNN  
Deputy Director  
Office of War Mobilization  
& Reconversion  
Washington, D. C.

### Labor Relations

*Editor, Western Industry:*

I have read several copies of your magazine and can compliment you very highly on its content, particularly on the labor section which does a very good job not duplicated in other trade journals.

Since we have the operation in Berkeley and expect big things from the Pacific Coast section, we will follow *Western Industry* closely, and you might be interested to know that two of our local managers have requested to be put on my mailing list so that they may review it as it comes to me each month.

A. J. WESTMAAS, *Manager*  
Industrial Relations  
B. F. Sturtevant Company  
Boston, Mass.

### We Hope You Do, Mr. Krug

*Editor, Western Industry:*

I have read the editorial in your April issue, "He Knows the West Exists," with a great deal of interest and pleasure and I want you to know that I appreciate your generous references to me.

I will conscientiously strive to carry out my new responsibilities to the very best of my ability. It is my hope that my actions will merit your approval and support.

J. A. KRUG  
Secretary of the Interior  
Washington, D.C.

## Editor's Field Book Jottings

There is an ancient wheeze about the coroner, conducting a funeral in the potter's field, asking if anyone wanted to say a good word for the deceased. The ensuing silence was broken, so goes the story, by a man who announced that if no one had a good word for the deceased he would like to make a few remarks on behalf of Los Angeles.

A lot of cities in the Pacific Northwest need to take lessons from the above-mentioned Angeleno, we fear. On a recent press tour of 17 Oregon and Washington cities staged by N.A.M., only two made a real effort to sell the newspapermen on their local food products. All were hospitable, of course, but a golden opportunity for publicity was lost.

At Aberdeen the chamber of commerce gave each newspaperman a souvenir of canned crab, clams and salmon (with a spruce plate to accompany), and at Wenatchee each journalist guest got one of those big juicy apples that Wenatchee has made (and keeps on making) famous. At Tacoma, to be sure, they got samples from a mayonnaise factory they visited, and at Everett the hotel manager provided locally-caught fish filets at lunch, but these were individual efforts, not the work of the chamber of commerce.

But at Salem, home of the famous tart Oregon prune, this tasty fruit was ignored. Even the waitresses in the hotel didn't know the difference between an Oregon and a California prune! And as for Wilamette cherries, even less was said.

At Astoria, where the newsmen heard a long story in the morning about the huge carryover of frozen fish filets, the luncheon entree was meat instead of filets. ("There isn't any eating place in Astoria that knows how to cook fish," apologized an Astorian afterward.)

Now at Olympia there might have been served those delectable tiny Olympia oysters . . . but no! (They could be had . . . we found them at the hotel.) And at Tacoma there might have been excellent sales promotion effort on Puyallup Valley berries . . . but no!

. . . At Mount Vernon, where they boast of butterfat twice as rich as the national average, all the visitors heard was an apology for the absence of butter, to the effect that milk for children was more important than butter for adults.

Last of all, at Yakima, where they speak scornfully of apples as a sideline fit only for Wenatchee, not a sign of a pear was visible. When the ever-widening city limits of Los Angeles appear menacingly on the horizon, perhaps the above-mentioned chambers of commerce will awaken.



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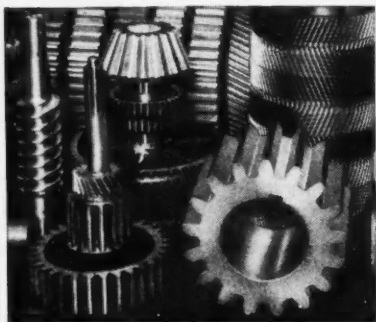
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**S**TEEL SHEETS with good forming qualities contribute to the efficient, profitable operation of your shop. They result in better jobs . . . enable you to turn out more of them . . . in shorter time . . . with less waste.

U·S·S STEEL SHEETS are noted for their superior forming qualities. Uniform in surface and flatness, they may be bent, rolled, cut and stamped. The line includes such specially processed, special purpose sheets as Galvanized, Galvannealed, Long Ternes, Hot and Cold Rolled Steel, Copper Steel and Stainless Steel. Within this group are sheets that are highly resistant to corrosion, rust and acids.

But, workability and durability are not the only reasons for using U·S·S Steel Sheets. They are the best-known, most widely advertised sheets in the industry. Your customers know that the familiar U·S·S trademark stands for highest quality. Thus, jobs done with U·S·S Steel Sheets are easier to sell . . . assure lasting customer satisfaction.

Keep in touch with your nearest U·S·S Steel jobber . . . and, remember, that while stocks at present are limited and deliveries slow, we are doing all we can to correct the situation. U·S·S Steel Sheets are well worth waiting for. Your patience will be rewarded.

## U·S·S STEEL SHEETS

COLUMBIA STEEL COMPANY  
*San Francisco · Los Angeles · Portland · Seattle · Salt Lake City*  
 CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*  
 TENNESSEE COAL, IRON & RAILROAD COMPANY, *Birmingham*  
 United States Steel Export Company, *New York*

### U·S·S STEELS FOR SUCCESSFUL SHEET METAL WORKMANSHIP

**U·S·S GALVANIZED STEEL** for sheet metal structures requiring the added protection of a zinc coating.

**U·S·S COPPER STEEL** to give twice the atmospheric corrosion resistance of regular steel at little additional cost.

**U·S·S DUL-KOTE**—A dull-surfaced galvanized sheet and U·S·S PAINTBOND—a Bond-erized, galvanized sheet, both specially prepared for immediate painting and better paint adherence.

**U·S·S HOT-ROLLED AND COLD-ROLLED STEEL** to provide the basic advantages of steel, plus maximum economy, in accordance with the needs of each individual job.

**U·S·S STAINLESS AND HEAT-RESISTING STEELS** to assure high resistance to corrosion and heat, and to reduce weight.

**U·S·S VITRENAMEL** — Sheets designed especially for porcelain enameling.

**U·S·S LOW-ALLOY, HIGH-STRENGTH STEELS** to resist corrosion and increase strength-weight ratio.



EVERY SUNDAY EVENING, United States Steel presents *The Theatre Guild on the Air*. American Broadcasting Company coast-to-coast network. Consult your newspaper for time and station.

# UNITED STATES STEEL



# POMONA

## ADJUSTABLE

You can compensate your Pomona pump for wear—restore proper running clearance when at last it's necessary—by one simple "topside" adjustment. No need to pull the pump to eliminate recirculation; no high adjustment costs—and valuable pumping time is saved!

## Where there's a well ...here's the way!

For pumping water from wells, pits, sumps, lakes, rivers, etc., here's the way to cut costs per gallon to the barest minimum—not only in the first year, but for many, many years to come! Pomona vertical turbine pumps have the combination you're after—high, maintained efficiency for continued low power cost, plus lowest yearly maintenance expense!

## NO HIDDEN LEAKAGE!

Pomona, another product of Fairbanks-Morse, protects your pocketbook against power losses and wasted water with a readily accessible shaft seal, or "packing box." Quick visual inspection and easy maintenance are assured!

**WHAT DO YOU NEED?** The patented Pomona revolvable, water-lubricated rubber bearing with double (inside and out) bearing surfaces means quiet vibration-free shaft support under all conditions.

Fairbanks-Morse vertical turbine pumps are built in sizes from 4" to 36"—with oil or water-lubrication—semi-open or enclosed impellers. Call your nearest Fairbanks-Morse office or your Pomona dealer for information on the pump best fitted to your job.

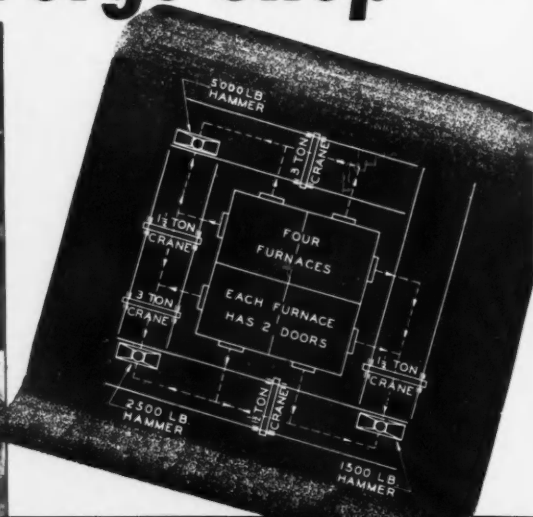
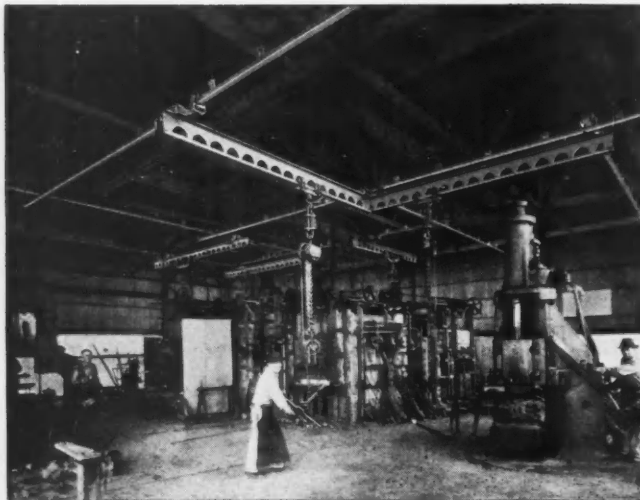
## FAIRBANKS-MORSE



### A name worth remembering

DIESEL LOCOMOTIVES • DIESEL ENGINES • MAGNETOS • GENERATORS • MOTORS • PUMPS  
SCALES • STOKERS • RAILROAD MOTOR CARS and STANDPIPES • FARM EQUIPMENT

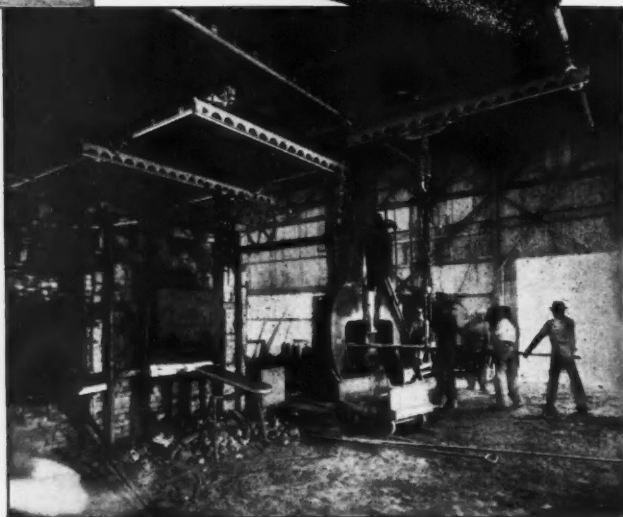
# Unusual Crane Installation Aids Forge Shop...



● Instead of customary jib cranes for handling forging stock from furnace to hammer, the Allegheny-Ludlum Steel Corporation (formerly Coulter-Sibbett & Burke Forging Shop), Los Angeles, have a unique arrangement of four Cleveland Tramrail runways, each with one or two hand-propelled cranes that serve four furnaces located in the center of the building as shown in sketch.

Although each hammer is served by two cranes there is no possibility of the operators interfering with each other. The cranes provide materials handling coverage for large areas of the building, rather than for only small circular sections as with jib cranes.

Because severe strains are transmitted to the cranes by the crushing hammer action, the flexible suspension of Cleveland Tramrail runways is of extreme importance. Preloading and crystallization characteristics found in rigid crane structures are eliminated by standard Cleveland Tramrail ball and socket connections on the runway supports, and heavy springs on the carriers.



Because of the flexible construction of Cleveland Tramrail equipment, heavy hammer shocks are absorbed without damage.



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**CLEVELAND TRAMRAIL DIVISION**  
THE CLEVELAND CRANE & ENGINEERING CO.  
1197 EAST 283RD ST. WICKLIFFE, OHIO.

**CLEVELAND TRAMRAIL**  
OVERHEAD MATERIALS HANDLING EQUIPMENT



### Valves for Refrigerant Gases

**Question:** Why is a diaphragm valve best suited for the control of Freon and other refrigerant gases?

**Answer:** The diaphragm seals against leakage of gas under pressure or in-leakage of air under high vacuum. Diaphragm must be impervious to destructive action of the gas.

The above cross-sectional view of a Grinnell-Saunders Diaphragm Valve shows how the molded diaphragm of special rubber compound, unaffected by refrigerant gases, prevents the loss of gas under pressure or the in-leakage of air under high vacuum conditions.

WHENEVER PIPING IS INVOLVED

No single type of piping material is suitable for the wide variety of operating conditions encountered in modern process industries. The Grinnell-Saunders Diaphragm Valve typifies the extent to which this company goes to solve the piping requirements of hard-to-handle liquids and gases.

The development of such piping special-

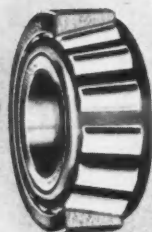
ties calls for wide piping experience, continuous laboratory research and skilled field engineering—the kind of a background that Grinnell brings to the job from 95 years of piping experience. As specialists in piping, Grinnell can supply everything from a tiny tube fitting to a complete power or process piping installation.

GRINNELL COMPANY, INC. Executive Offices.  
Providence 1, R. I. Branch warehouses at Los Angeles,  
San Francisco, Oakland, Seattle.



WHENEVER PIPING IS INVOLVED

## DODGE PUTS TIMKEN BEARING PRECISION



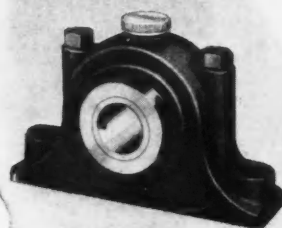
## INTO WORKING CLOTHES

Delivered fully assembled, adjusted, lubricated, the Dodge-Timken Double Interlock Pillow Block is ready to lock on the shaft, run at full speed and full load. Dodge mounts, seals and houses the bearing assembly, with its double row of precision-finished rollers—makes it available for immediate service, with no assembling required on the job.

From our foundry, through many precision operations, on the latest machine tool equipment, the parts required for mounting this bearing are manufactured complete in the Dodge factory. This is one of the famous Dodge 30,000 hour line, covering a wide range of industrial bearing requirements, and promptly available from distributors' stocks.

Look for the Dodge distributor in your classified telephone directory under "Power Transmission Equipment."

**DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA**



# Dodge-Timken Double-Interlock Bearing



### THE SYMBOL THAT CAME TO LIFE

257 factory graduate Transmissioners wear this sign of a nation-wide personal service that provides the latest answers to power transmission problems.



# DODGE

MISHAWAKA

Copyright, 1946, Dodge Mfg. Corp.

FOR YOUR NAME PLATE REQUIREMENTS, WRITE OUR SUBSIDIARY,  
ETCHING COMPANY OF AMERICA, 1520 MONTANA STREET, CHICAGO 14, ILLINOIS



Take it Easy *but...when you need Steel*



**N**O TROUBLE to *Raise Caine* for steel. Relax . . . whether you order a bar or a carload, you'll find that our pleasant, courteous sales representatives and order desk staff are eager to please you. They're technically trained, experienced men who take pride in giving prompt, efficient service.

Caine Steel carries a diversified line of sheet steel, plates, bars, bands and structural steel. They're fully equipped to cut and prepare steel to your requirements. Just another reason why you'll find *Raising Caine* is the easy way to fill your steel requirements.

**WAREHOUSE STOCKS OF:**

**SHEET STEEL**

HOT ROLLED.  
COLD ROLLED.  
GALVANIZED.  
LONG TERNES.  
VITREOUS  
ENAMELING.  
UNIFORM BLUE.

**STRIP STEEL**

HOT ROLLED  
COLD ROLLED

**COLD ROLLED  
FLAT WIRE**

MILD STEEL  
BARS, BANDS,  
AND PLATES

HOT ROLLED  
STRUCTURAL  
SHAPES

*Raise Caine*



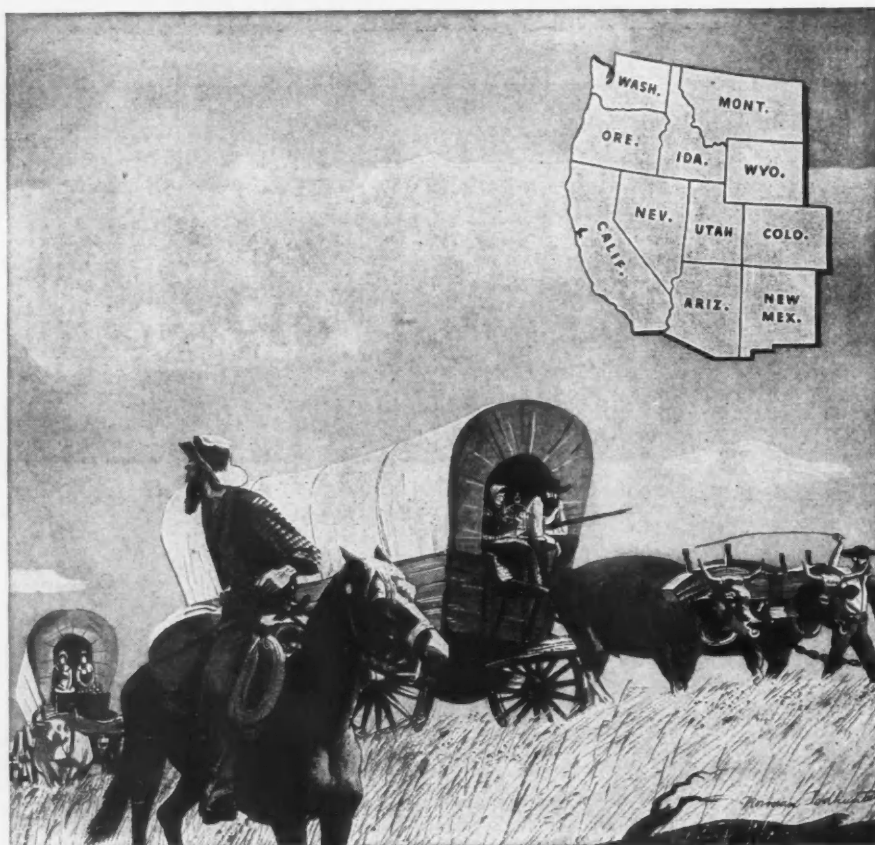
**FOR STEEL**

**CAINE STEEL CO. of CALIF.**

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**OAKLAND 8**  
3110 Adeline St. • HU. 0900

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## SO, YOU'VE COME WEST?

### WELCOME FROM A PIONEER!

Yes, it was the "wild and woolly West" when Fuller started in '49. But, today it's the awake and working West. Bigger, better equipped, production-proved and keenly conscious of mammoth markets across the Pacific.

So, welcome, new industries—each of you—from a '49er! No matter what your job, FULLER can serve you. We've solved knotty industrial paint problems for half a century. We're still doing it, for small shops, for large plants. If you've a new problem, we can solve that, too.

But—there's a better way than reading this to find out. Have us show you! That's the practical action FULLER technicians like to give to industrial customers.

W. P. Fuller & Co. factories at San Francisco, Los Angeles, Portland; Branches and Warehouses in principal Western cities.

*"Specialized finishes"*

# FULLER

# INDUSTRIAL PAINTS

## THE WEST— AMERICA'S NEW INDUSTRIAL FRONTIER!

FULLER—West's oldest, largest, most relied upon paint maker—welcomes the *pioneer spirit* again so evident. We banked on the future in '49. We're still enthused in '46.

\* \*

Below, briefed, a partial roll of FULLER'S part in the growth of the West.

### AIRCRAFT FINISHES

Air-minded from the first, Fuller developed aircraft finishes that became standard for the industry, helped mightily during the war. Now all Fuller Aircraft Finishes again available to both commercial and private plane owners.

### PRODUCTION FINISHES

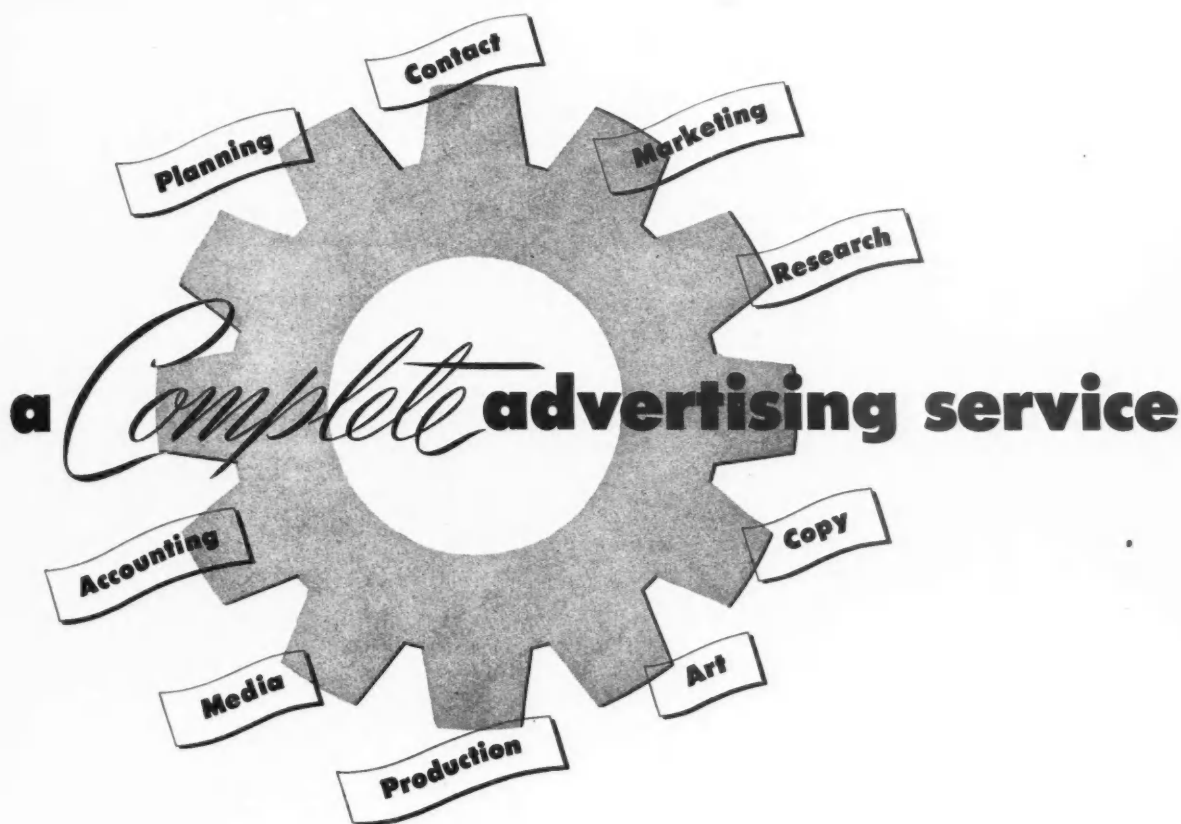
Wood, metal, plastic, or whatever—Fuller Industrial Finishes do a dual job. They meet exacting production demands; make sales department happy, too. Mr. Production Manager, Mr. Sales Manager—ask us!

### MAINTENANCE FINISHES

Paints protect, preserve. Wide acceptance proves ours ace high. We go further—know the psychology of color. Fuller Color Engineering is a valuable management aid to reduce workers' strain, assure safety, increase output. Costs nothing to find out!

### MARINE FINISHES

Fuller Marine Finishes have a long record of paying out in service under the toughest possible exposure. That's why so many ship operators specify Fuller, from bridge to bottom. Interested in pay-out service? Fullerize!



★ Behind the power of the printed word and the most effective sales campaign lies a *complete* agency service which cannot be easily duplicated. Based on 26 years' experience in all branches of advertising, The McCarty Company has built an organization of men and women skilled in planning, contact, marketing, research, copy, art, production, media and accounting. Together they produce resultful advertising.

Your advertising becomes simplified when you can command the experience of a coordinated, complete agency service. That is how The McCarty Company has helped for many years in increasing sales for some of the West's largest and most progressive industries.

All five offices of The McCarty Company, located in strategic industrial sections of the country, stand ready to offer you the same successful service.

## THE McCARTY COMPANY

ADVERTISING COUNSELLORS

*Established 1919*

LOS ANGELES • SAN FRANCISCO • SEATTLE • DALLAS • PITTSBURGH

**NOW AVAILABLE!**

**GOVERNMENT SURPLUS**

# **METALS**

**FOR IMMEDIATE DELIVERY**

**T**HE Western Regional offices of the War Assets Corporation have joined together in a cooperative sales offering of ferrous and non-ferrous metals. If items you seek are not listed, you may be able to obtain them through the nearest War Assets Corporation office.

## **COPPER TUBING**

Hard or soft drawn seamless, in coils or various straight lengths (crated). Various diameters and thicknesses.

## **ALUMINUM**

Sheets and tubing in various sizes, thicknesses and specifications (San Francisco). Bars, rods, tubing and extrusions, (Los Angeles).

## **BRASS**

Brass pipe, Grade A seamless in 12 to 16 foot random lengths 1/2" to 5" diameters.

## **PIPE**

Small inventories of: cast iron and steel pipe in various sizes; fittings including reduction couplings, tees and elbows; well casing; lap-weld and galvanized pipe; and steel tubing.

## **VALVES**

A broad range of valves in various sizes and materials including wedge gate, swing, check, float, globe and plug, with wheel, wrench or hydraulic control.

## **CABLE - WIRE ROPE**

Choice selection of cable in various sizes (with hemp or fibre core) including guy-wire type galvanized or tinned. Also heavier cables with serration, suitable for bonding, guying, guard rails, etc.

## **LEAD BASE ALLOYS**

Limited inventories of babbitt and solder. Determine availability through nearest W.A.C. office.

## **STEEL**

### **PLATES**

Sheared or milled plates in wide range of sizes carried in most W.A.C. western inventories.

### **SHEETS**

Limited supply in scattered locations (broken lines). Hot rolled alloy sheets (SAE 9130) from 7 to 14 ga. varied widths from 29" to 70" and lengths from 86" to 168", available from San Francisco inventory.

### **BAR**

Good supply carbon square, and octagon in varying lengths and diameters.

Production bars, round mild steel in 20 foot lengths, available at Spokane or apply to nearest agency.

### **STRIP**

Varying thicknesses and widths (in rolls and flat).

### **STRUCTURALS**

Broad inventory in various dimensions and specifications.

### **MILL STOCK**

Various sizes and analyses, available at Salt Lake City.

# **WAR ASSETS CORPORATION**

A subsidiary of Reconstruction Finance Corporation

*Items offered subject to prior sale or withdrawal.  
Buying preference to Veterans of World War II.*

**WESTERN OFFICES:** Boston Building, DENVER, Alpine 0415 • Power Block, HELENA, Phone 461 • 215 West 5th St., LOS ANGELES, Michigan 6321 • Pittock Block, PORTLAND, ATwater 6401 • Dooly Bldg., SALT LAKE CITY, 5-7503 • Dexter Horton Bldg., SEATTLE, Main 1080 • Columbia Bldg., SPOKANE, Main 5111



# POWERFUL AIDS

*to Peak Production . . . Lower Cost*

## Thor

**PORTABLE  
ELECTRIC  
TOOLS**

*Lighter and More Compact, these Sturdy Tools  
Speed Fabrication, Assembly and Installation*

Smaller in size and lighter in weight for greater handling ease, Thor Electric Tools today have high-efficiency motors that provide more power-per-pound than ever before. Virtually impossible to stall, they make short work of tough jobs . . . and *stay on their job* day after day.

The complete Thor line of portable

electric tools includes drills and tappers; screwdrivers and nutsetters; grinders, sanders and polishers; hammers, nibblers and saws—all in a wide range of styles, speeds and capacities for light or heavy-duty service to meet any requirements. Call your nearby Thor Distributor for a demonstration.

### INDEPENDENT PNEUMATIC TOOL COMPANY

600 W. Jackson Boulevard, Chicago 6, Illinois

Birmingham	Boston	Buffalo	Cleveland	Detroit	Los Angeles	Milwaukee	New York	Philadelphia
Pittsburgh	St. Louis		Salt Lake City	San Francisco		Toronto, Canada		London, England



"FINGER-POINT" ACCURACY at 2500 r.p.m. is what you get with this  $\frac{1}{8}$ " cap. Thor No. U14AP drill. Other Thor drills up to  $1\frac{1}{4}$ " in steel.



AN AUTOMATIC ADJUSTABLE CLUTCH enables this Thor U16CP Screwdriver to drive screws to uniform tightness at top speed.

... **Thor** ... **PORTABLE POWER** ...  
**TOOLS**

PNEUMATIC TOOLS • UNIVERSAL AND HIGH FREQUENCY ELECTRIC TOOLS • MINING AND CONTRACTORS TOOLS



... that's why J-M 85% Magnesia is the standard for industry!

When it comes to insulations, "*nearly right*" is *wrong*!

That's why it pays to get J-M 85% Magnesia . . . most widely used of all industrial insulating materials for temperatures up to 600° F. Offering high insulating efficiency for years of service, J-M 85% Magnesia is light in weight . . . uniform in composition. Furnished in pipe covering form and in straight or curved blocks, it may be quickly applied to flat or rounded surfaces.

And to get complete insulating efficiency, it's good business in the selection of materials to rely on the professional judgment of Johns-

Manville insulation engineers . . . specialists whose knowledge and skills are backed by 88 years of J-M experience and research.

Remembering that insulation will only render its maximum efficiency when properly applied, Johns-Manville offers an application service of skilled construction units. These units are organized to handle every detail of *your* insulation requirements—from plans to finished job.

You can get complete details, including answers to any specific questions you may have, from Johns-Manville, 22 East 40th Street, New York 16, N. Y.



**JOHNS-MANVILLE** *First in* **INSULATIONS**

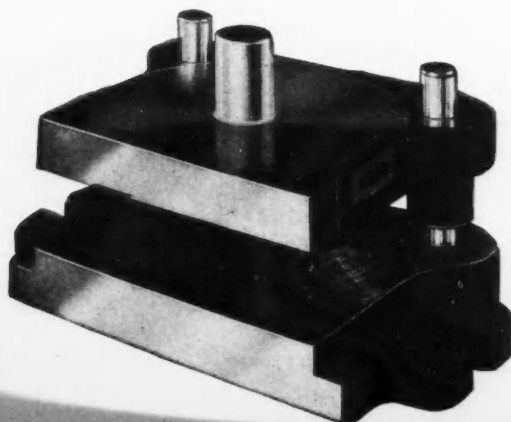
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*is on the Press Today*

The clean lines and rounded contours of modern office furniture and equipment—the innumerable duplicated parts in typewriters, calculators and other office machines are ideally suited to Press Production. The Punch Press is the best and fastest method of duplicating parts for the vast field of industrial and business machines; and the entire Stamping Industry recognizes Danly Die Sets as vital in speeding die making programs, press production, and eliminating “downtime” because Danly means *known dependable accuracy*.

**DANLY MACHINE SPECIALTIES, INC.**  
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*National Assembly*

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3858 Pulaski Avenue
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47-28 37th Street
- **DUCOMMUN METALS & SUPPLY CO.**  
4890 South Alameda, Los Angeles

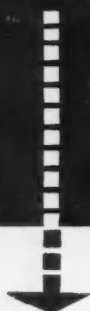
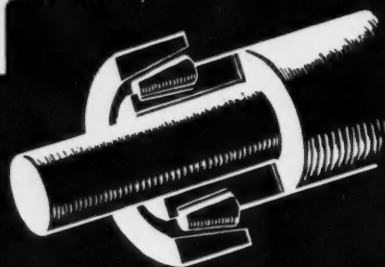


**DIE MAKERS SUPPLIES**

## DANLY DIE SETS

*Welded Steel Fabrication*

# tailored to fit a "tough customer"



## Cycol Electric Motor Grease

A high melting point grease especially formulated for ball or roller bearings. Widely used in plants throughout the West. Can be used sparingly, thus economically.

. . .

Correct motor bearing lubrication can improve operating efficiency as well as minimize wear and costly breakdowns. Cycol

Electric Motor Grease masters the extreme speed and temperature conditions of electric motor operation and prolongs the life of balls and races. Ask your Associated Representative about other uses to which its special characteristics adapt it.

*Tell Your Associated Dealer You Want a Credit Card*

**Correct Lubrication  
is Machinery's Most  
Vital Need**

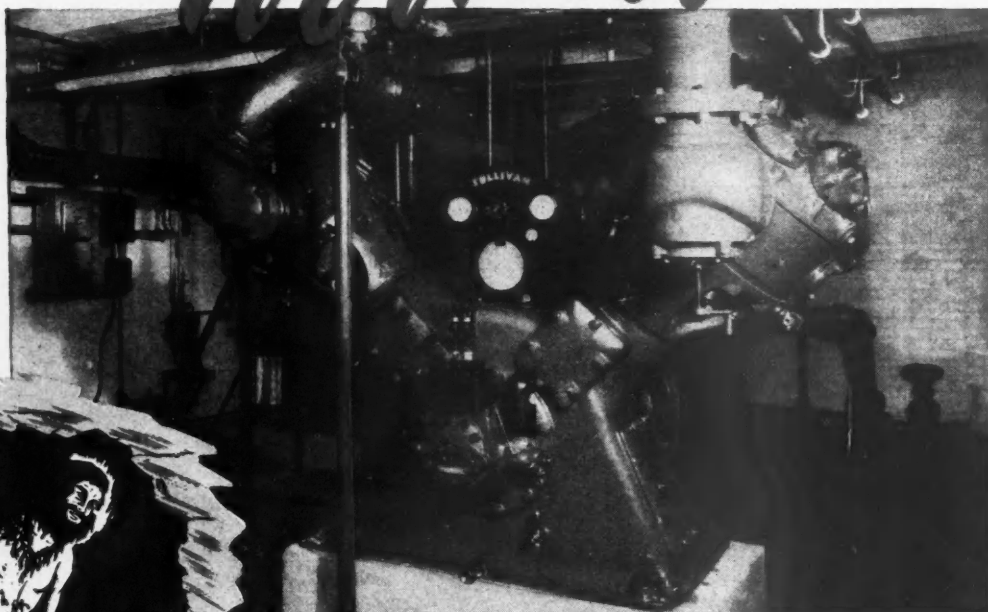


**TIDE WATER  
ASSOCIATED  
OIL COMPANY**



Maintenance Engineers call them

*hermits!*



## Sullivan WN-112 air compressors

Maintenance engineers call their Sullivan WN-112 air compressors "hermits" because they turn out full rated capacity twenty-four hours per day year after year with so little attention that they are almost forgotten. It is not unusual for them to run thousands of hours continuously without any maintenance.

Sullivan WN-112 compressors are modern, two-stage, double-acting, heavy-duty, continuous-service compressors, much smaller than old style compressors of the same capacity and yet have operating economies exceeding those of the older, bulky units.

Available in single or twin units with piston displacement capacities ranging from 378 c.f.m. to 1828 c.f.m. at pressures up to 125 p.s.i. For complete details ask your nearest Sullivan office for Bulletin A-52. Sullivan Machinery Company, Michigan City, Indiana. In Canada: Canadian Sullivan Machinery Co., Ltd., Dundas, Ont.

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**THE WORLD'S FINEST AIR COMPRESSORS from 1/4 to 3,000 H. P.**

**PRODUCTS:**  
STATIONARY AND PORTABLE AIR COMPRESSORS  
PNEUMATIC CASTING GRIPS - FOUNDATION  
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**Offices:** SEATTLE - BOSTON - NEW YORK - CHICAGO - PORTLAND - PITTSBURGH - ST. LOUIS  
DETROIT - SAN FRANCISCO - BIRMINGHAM - KNOXVILLE - HUNTINGTON - LOS ANGELES  
DULUTH - EL PASO - BUTTE - SALT LAKE CITY - SCRANTON - DENVER - DALLAS



## Now watch, gentlemen, as the color changes

This one's an old favorite. Now it's red ink and now it's *black*.

Fact is, the difference between monthly red and monthly profit is sometimes simpler than it seems. Changes in the business forms, an outside look at an inside system, and economies mount on up dollar by dollar by dollar.

Moore Business Forms, Inc., is called on time and again to see how overhead can be pared, overtime eliminated, confusion in inter-office-routine transformed into order.

Moore studies one form or many, suggests changes and combinations, and then supplies the forms. Results are written in black.

No corner store is too small, no corporation too great, to profit by Moore service. For information, get in touch with the nearest Moore division, as listed below, or its local office. *Moore stands ready to supply you with everything from a simple sales book to the most intricate multiple-copy form.*

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# MOORE BUSINESS FORMS, INC.

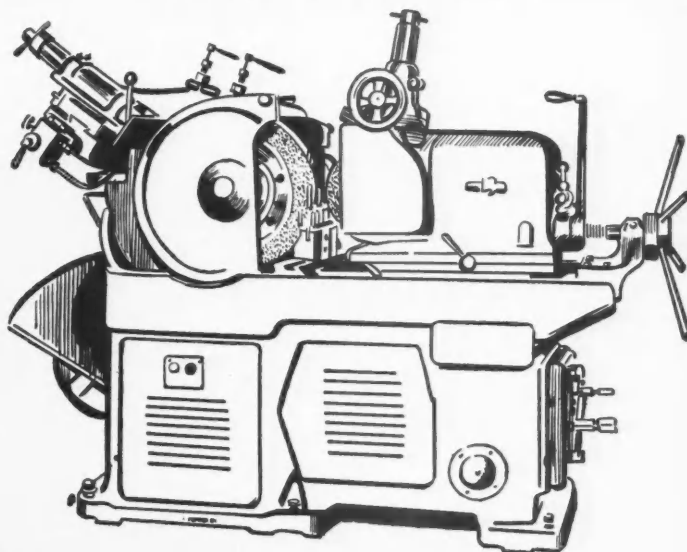
ADV. BY H. W. REED

# GOVERNMENT-OWNED SURPLUS PRODUCTION EQUIPMENT

**STANDARD MAKES**

**STANDARD MODELS**

## CENTERLESS GRINDERS

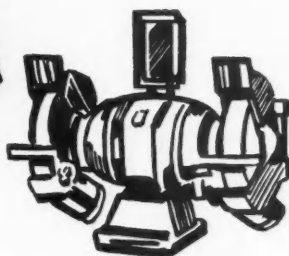


CINCINNATI CENTERLESS GRINDERS: Model No. 2 located in Detroit, Chicago, Cleveland, Boston, Philadelphia and New York; Model No. 3 located in Detroit, Chicago, Cleveland, and Boston Regional Offices.

Do you need additional machine tools for new operations . . . or to speed up old? Thousands of machine tools, like these grinders, are surplus and available to you at low cost. The equipment is modern; much of it unused, some only slightly used. Look today for places to use this equipment. You will be rendering a vitally important service—not only to yourself as a producer and taxpayer—but also to the country as a whole. These tools *must* go to work to produce badly needed peace time products.

**BENCH GRINDERS**

BROWN-BROCKMEYER: 2-wheel, electric bench grinders in 8" and 10" wheel sizes located in San Antonio Regional Office of War Assets Administration.



### VETERANS OF WORLD WAR II

To help you in purchasing surplus property, veterans' units have been established in each War Assets Administration Regional Office.

### MAIL TODAY

To War Assets Administration:

Please send me information on the availability of the following types of grinders:

MAKE	MODEL	SIZE
.....	.....	Centerless grinders
.....	.....	Bench grinders
.....	.....	..... grinders (other)

Name .....

Firm .....

Address .....

City ..... ate.....

277-3

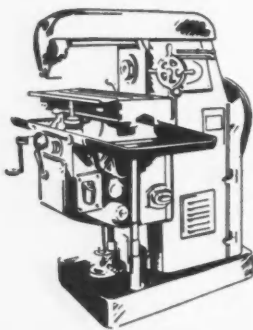
## WAR ASSETS ADMINISTRATION

OFFICES LISTED BELOW ARE TEMPORARILY IN  
RECONSTRUCTION FINANCE CORPORATION AGENCIES

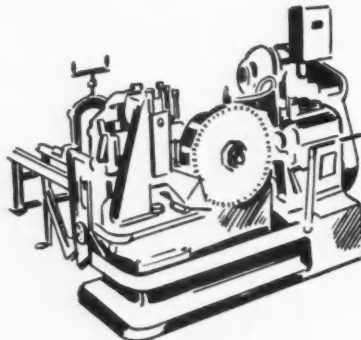
Offices located at: Atlanta • Birmingham • Boston • Charlotte • Chicago • Cleveland • Dallas • Denver  
Detroit • Helena • Houston • Jacksonville • Kansas City, Mo. • Little Rock • Los Angeles • Louisville  
Minneapolis • Nashville • New Orleans • New York • Oklahoma City • Omaha • Philadelphia  
Portland, Ore. • Richmond • St. Louis • Salt Lake City • San Antonio • San Francisco • Seattle • Spokane  
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GOVERNMENT OWNED SURPLUS

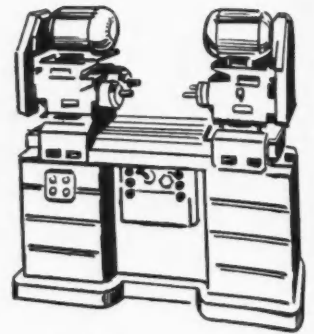
# MACHINE TOOLS



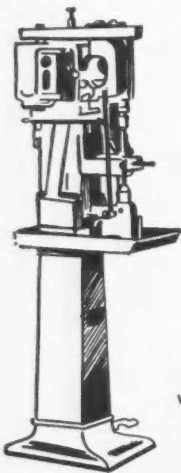
**AUTOMATIC BED TYPE MILLING MACHINES**  
Models 1-12 and 1-18, located in New York, Detroit, Cleveland, Chicago, and Boston Regional Offices.



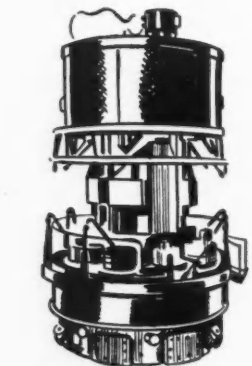
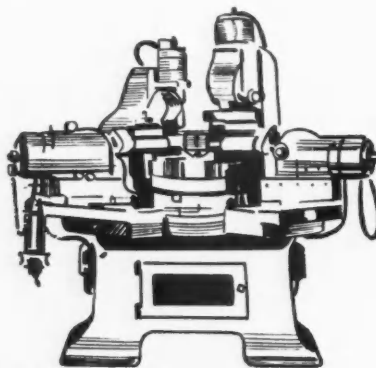
**COLD SAWING MACHINES, CIRCULAR**  
1½" to 21" capacity, in standard models of well known makes, located in Detroit, Chicago, Cleveland, Philadelphia, Boston Regional Offices.



**PRECISION BORING MACHINES**  
Both single and double end types located in Detroit, Chicago, Boston, Cleveland, Minneapolis, Kansas City and, in lesser quantities, other Regional Offices.



**VERTICAL & HORIZONTAL DRILLING MACHINES**  
Special Kingsbury type machines located in Boston, Chicago, Detroit, Philadelphia, Richmond, St. Louis and, in limited quantities, other Regional Offices.



**LATHE, MULTIPLE SPINDLE, AUTOMATIC VERTICAL CHUCKING**  
Largest inventories located in Boston, Chicago, Cleveland, Detroit, New York and Philadelphia.

## WAR ASSETS ADMINISTRATION

OFFICES LISTED BELOW ARE TEMPORARILY IN  
RECONSTRUCTION FINANCE CORPORATION AGENCIES

Offices located at: Atlanta • Birmingham • Boston • Charlotte • Chicago • Cleveland • Dallas • Denver  
Detroit • Helena • Houston • Jacksonville • Kansas City, Mo. • Little Rock • Los Angeles • Louisville  
Minneapolis • Nashville • New Orleans • New York • Oklahoma City • Omaha • Philadelphia  
Portland, Ore. • Richmond • St. Louis • Salt Lake City • San Antonio • San Francisco • Seattle • Spokane  
Cincinnati • Fort Worth (Telephone 3-5381)



# PRODUCTION EQUIPMENT

# NOW!

## MODERN MACHINES...MANY MODELS...STANDARD MAKES

These machine tools *must* go to work. You need the profits. America needs the production. Taxpayers need maximum recovery to the government of their original cost. On hand, at every War Assets Administration office in the U. S. there are hundreds of these machines. Nearly every category of modern production equipment can be obtained at low cost. You have a unique opportunity to initiate new enterprises or modernize old . . . and at the same time do your country an important service. Check this partial list over carefully for equipment you can use. Then write, wire, or phone your nearest War Assets Administration office for detailed information, or if you prefer mail the coupon.

### CHECK LIST OF SPECIAL MACHINE TOOL BUYS!

Here are a few of the many thousands of machine tools available through War Assets Administration.

MACHINE (Function)	TYPE	SIZE OR CAPACITY	Quantity Available Now
Boring, Drilling & Milling	Horizontal	Under 3" to 6"	209
Boring & Turning Drills	Vertical	Under 36" to 120" Swing	683
Boring Fixed Rail Tank Mill	Vertical		87
Precision Boring Machines	Horizontal bridge—single end	Under 8" to 14"	486
	Horizontal bridge—double end	Under 8" to 14"	226
Drills	Box column—single spindle	Under 1/2" Cap.	
		Up to 22" Swing	287
		1/2" to 1" Cap.	187
	Round column—single spindle	16" to 24" Swing	
		Under 1/2" Cap.	
		Up to 22" Swing	738
	Sensitive Floor & Pedestal Box column	1/2" to 1" Cap.	1163
		16" to 24" Swing	
		Under 1/2" Cap.	
		12" to 22" Swing	933
	Sensitive Floor & Pedestal Round column	1/2" to 1" Cap.	1875
		16" to Over 24" Swing	
		1" Cap. and over	434
		24" Swing and over	
		Under 1/2" Cap.	384
		12" to 22" Swing	1131
		1/2" to 1" Cap.	
		Under 16" to 24" Swing	

**EXPEDITING  
FREE! COUPON**

Use this coupon to conserve your time. Print in a brief description of the make, type, model, and size of machine in which you are interested. We will determine in advance our stock situation on the machines and inform you quickly. No obligation, of course.

**To War Assets Administration:** Do you have in surplus stocks the following machine tools? Where are they located? What is their condition?  
Type.....Make.....Model.....Size.....

MACHINE (Function)	TYPE	SIZE OR CAPACITY	Quantity Available Now
Drills	Sensitive Floor & Pedestal Upright Type—Box column	Up to 28" Swing	549
	Sensitive Floor & Pedestal Upright Type—Round column	Up to 28" Swing	161
	Heavy Manufacturing Type	Up to 32" Swing	296
	Spec. Kingsbury Way & Vertical		250
	Horizontal	4" to 16" Cap.	321
Gear Hobber	Vertical—Universal	Under 16" Diameter	89
Gear Shapers	External & Internal Spur—External only	Up to 40" Diam.	280
	Spur & Helical—External & Internal	Up to 25" Diam.	275
	Spur & Helical—External only		159
Gear Cutters	Bevel Type not incl. Plain Type Str. Bevel	Up to 36" Diam.	377
Gear Tooth Finisher	Generating Type		140
	Grinding		190
Gear Tooth Lapper	Formed Wheel Type		80
	External only		57
Gear Tooth Shaver	Comb. External & Internal		133
	Rotary Type		1730
Grinder	External Cylinder—Plain	Up to 20" Swing	1730
	External Cylinder—Universal	Up to 16" Swing	347
	Centerless—Internal and External	All sizes	607
	Cam		223
	Crank Pin		83
	Valve		245
	Internal Cylinder—Mechanical Feed	All sizes	320
	Internal Cylinder—Hydraulic Feed	Up to 42" Swing	1094
	Internal Cylinder—Internal Cylinder—Auto. Six. Comb. Halo & Face	Under 12" Swing	151
	Internal Cylinder—Auto. Six. Planetary Type	16" Swing and over	127
	Internal Cylinder—Auto. Six. Centerless	Under 16" Diam.	39
	Surface—Horiz. Spindle Rotary Table	Up to 28" Diam.	146
	Surface—Vertical Single Spdl. Rotary Table	All size table diam.	274
	Surface—Reciprocating Horiz. Spindle—Hand Feed	12" to 48" Table Diam.	157
	Surface—Reciprocating Horiz. Spindle—Power Feed	12" length work cap. and over	146
	Thread—Reciprocating Horiz. Spindle—Power Feed	Under 18" to 120" length work cap.	840
	Thread—External only	All sizes	635
	Thread—External & Internal	8" Cap. and over	82
	Tool & Cutters—Universal	All sizes	691
	Drill	All sizes	348
	Single Point Tool	All sizes	458
	Bench—Double End	All sizes	2876
	Bench—Single End	Up to 8" Wheel diam.	1105
	Floor—Double End—Dry	Up to 24" Wheel diam.	831
	Floor Comb.—Wet & Dry	10" to 16" Wheel diam.	216
	Bench Floor & Snag		
	—Swing Frame		155
	Comb. Grinder & Buffer		1805

Name.....Tel. No.....

Title.....

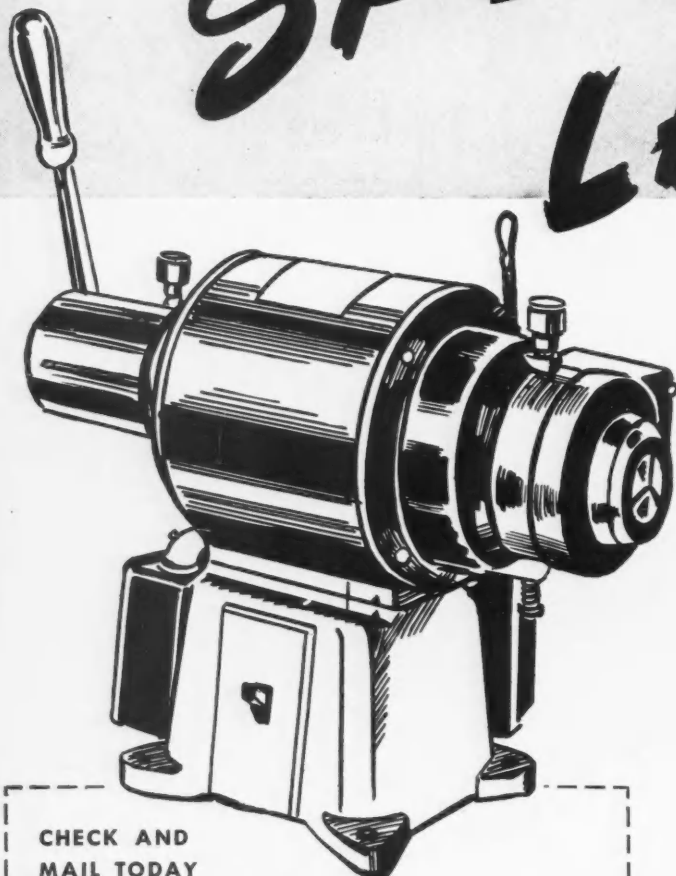
Firm.....

Address.....

City.....State.....

**GOVERNMENT-OWNED  
SURPLUS PRODUCTION  
EQUIPMENT**

# SPEED LATHES



**1/8 TO 5 H.P.  
STANDARD MAKES  
AT LOW COST**

Speed Lathes like this are just one of dozens of kinds of modern machine tools now available from government surpluses. For instance look at the equipment shown on the three preceding pages. Of *immediate* machine tool needs, there is scarcely one which cannot be met quickly, and at low cost, from War Assets Administration stocks—and additional equipment is being declared surplus regularly. One of industries' and government's major post war tasks is to put this equipment to productive use quickly. More specifically—where can you use one or more of these speed lathes profitably? Find out today and contact any War Assets Administration Office.

**WHERE SPEED LATHES ARE!**

W.A.A. Regional Office	1/8 HP—	1/2 to 1 HP	1 to 3 HP	3 HP+
Detroit	204	231	147	22
Chicago	97	86	87	65
Boston	33	89	.....	.....
Cleveland	57	32	19	.....
New York	6	.....	3	.....
Denver	11	60	.....	.....
St. Louis	155	.....	26	.....
Minneapolis	67	14	6	.....
Spokane	3	11	.....	.....

**CHECK AND  
MAIL TODAY**

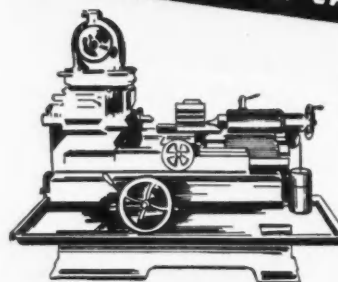
To War Assets Administration:

Without obligation, please send me the following information on lathes:

	MAKE	MODEL	SIZE
Speed Lathes <input type="checkbox"/>	.....	.....	.....
Multi-cut Lathes <input type="checkbox"/>	.....	.....	.....
Other types <input type="checkbox"/>	.....	.....	.....
Name.....			
Firm.....			
Address.....			
City.....	State.....		

277-3

**SMALL PIECE MULTI-CUT  
PRODUCTION LATHES**



These Reid lathes may be stripped and retooled for any special kind of small production work. Machines located principally in Birmingham, Boston, Chicago, Cleveland, Detroit, New York, Philadelphia, Richmond and St. Louis Regional Offices.

## WAR ASSETS ADMINISTRATION

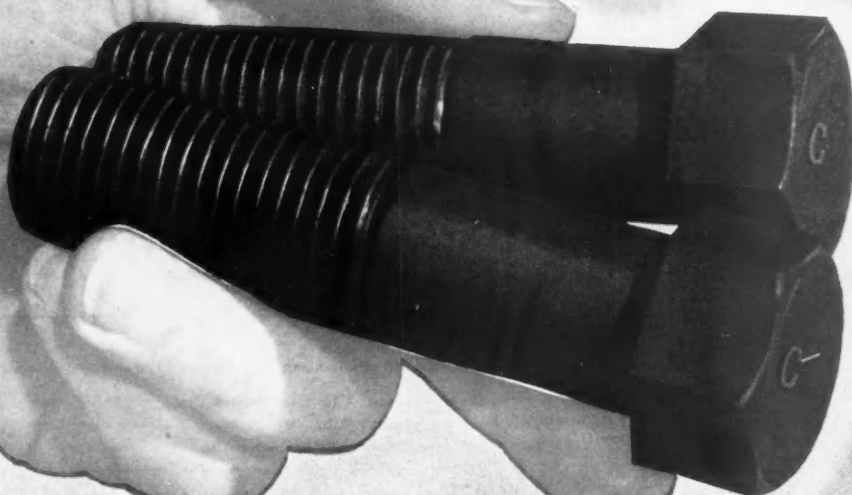
**OFFICES LISTED BELOW ARE TEMPORARILY IN  
RECONSTRUCTION FINANCE CORPORATION AGENCIES**

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Minneapolis • Nashville • New Orleans • New York • Oklahoma City • Omaha • Philadelphia  
Portland, Ore. • Richmond • St. Louis • Salt Lake City • San Antonio • San Francisco • Seattle • Spokane  
Cincinnati • Fort Worth (Telephone 3-5381)

**DOUBLE**

**EXTRUSION**

gives Cleveland Top Quality Cap Screws  
the tough strength for farm equipment  
jobs . . . or any fastener application.



**I**T pays you to use Cleveland High Carbon Heat Treated Cap Screws in all hard-usage equipment assembly. In most sizes they cost no more than bright full finished screws but assure maximum strength to withstand the toughest stresses. Double extrusion, applied through the Kaufman Process, creates a more closely knit grain structure on the surface while preserving the interior ductility of the steel. Specify Cleveland *Top Quality* Fasteners.

**CLEVELAND**  
*Top Quality*  
**FASTENERS**

*The Cleveland Cap Screw Company*

2917 EAST 79TH STREET • CLEVELAND 4, OHIO

Warehouses: Chicago, Philadelphia and New York

Cleveland Fasteners are Stocked by your West Coast Jobber

**MADE BY THE ORIGINATORS OF THE KAUFMAN PROCESS FOR GREATER STRENGTH AND ACCURACY**



*"29% decrease in  
typists' errors!"*



*"37½% decrease  
in absences!"*

*"47% decrease in  
employee turnover!"*



**All done with SOUND CONDITIONING!**

**Q.** That's claiming a lot for sound conditioning. Where's your evidence?

**A.** A major company, by actual test, conclusively demonstrated that sound conditioning paid those dividends. What's more, over-all efficiency of employees was increased 8.8%!

**Q.** What does noise do to people to affect them so seriously?

**A.** "There is both practical and experimental evidence," says the *Manual of Industrial Hygiene* of the U. S. Public Health Service, "to indicate that noise produces fatigue, decreased efficiency, impaired hearing, emotional disturbances and neurosis."

**Q.** How does sound conditioning stop noise?

**A.** Sound is reflected from a hard surface just as light is reflected from a mirror. Thus in an average room with hard plaster walls and ceiling, the sound, traveling at an approximate speed of 1120 feet per second, will bounce around the room in all directions many times before the energy it contains is dissipated, or absorbed. In a sound conditioned room, the sound is not sustained by repeated reflections. And loudness is lessened because the original sound dies out faster.

**Q.** What's the most widely used sound conditioning material?

**A.** Acousti-Celotex,\* the original and genuine perforated fibre tile. So consult your local Acousti-Celotex distributor. His advice is yours without obligation and he guarantees results.

**Distributors of Acousti-Celotex in the West**

**ASBESTOS SUPPLY COMPANIES**

SEATTLE • TACOMA • PORTLAND • SPOKANE • MISSOULA

**JAY GREAR CORPORATION**

ALBUQUERQUE • EL PASO

**J. B. MATZ, SPECIALTY CONTRACTOR**

PHOENIX

**LAUREN BURT, INC.**

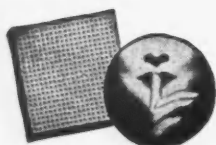
FORMERLY ROCKY MOUNTAIN ACOUSTICAL CO.  
DENVER • SALT LAKE CITY

**THE HAROLD E. SHUGART CO.**

LOS ANGELES

**WESTERN ASBESTOS COMPANY**

SAN FRANCISCO • OAKLAND • SACRAMENTO



*Sound Conditioning with*  
**ACOUSTI-CELOTEX**

*\* Perforated Fibre Tile* REG. U.S. PAT. OFF. **SINCE 1923**



**From  
Garden  
Tractors  
to Rivets**

# PROTECT SHIPMENTS THE SIGNODE WAY

Signode's System of **PLANNED PROTECTION** provides greater security for every type of shipment. Signode Steel Strapping, and the tools used to apply it, are merely the basic elements in a complete system for safeguarding every type of shipment—from small bundles to carload units.

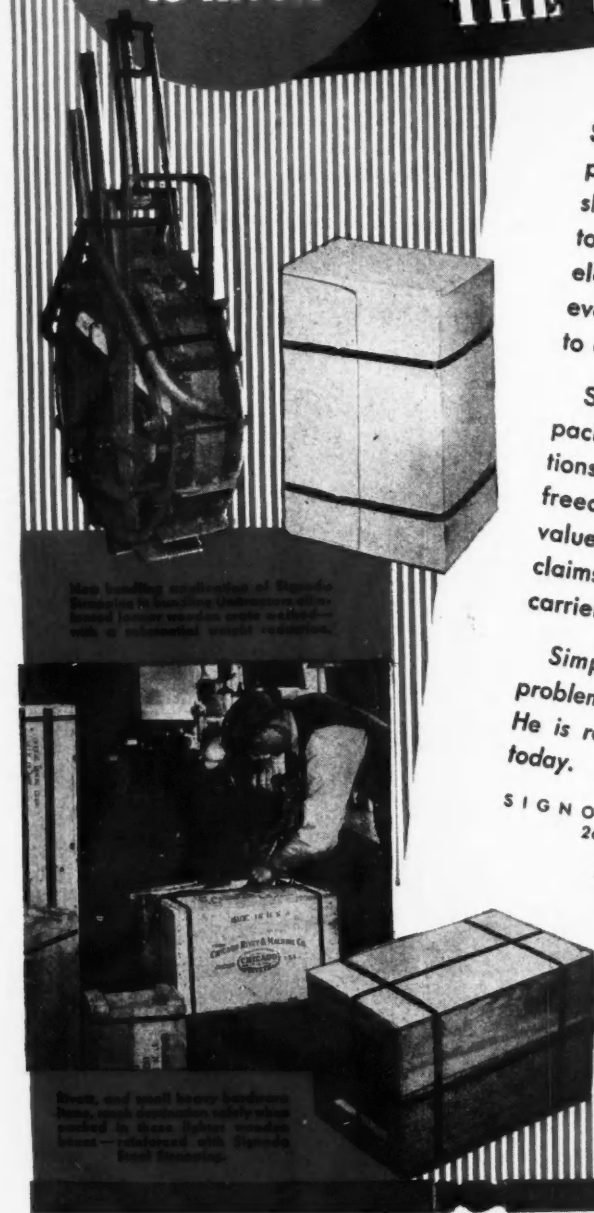
Signode's men will help plan the method of packing or stowing for shipment. Such applications save time and labor, and insure greater freedom from damage in transit. Other plus values include a definite reduction in damage claims and increased satisfaction for shippers, carriers and consignees.

*Simplify your own packaging and stowing problems with the aid of a Signode Specialist. He is ready to help you. Phone, write or wire today.*

**SIGNODE STEEL STRAPPING CO.**  
2615 N. Western Avenue, Chicago 47, Illinois  
458 Bryant St., San Francisco 7, California  
441 Seaton St., Los Angeles 13, California  
1021 4th Avenue, Seattle 4, Washington

**SIGNODE**  
STEEL STRAPPING

Signode Seals, lithographed with your company's name, or trademark, are good advertising. They instantly identify a shipment and speed handling.





**Call the**  
**SHELL LUBRICATION ENGINEER as**  
**the FIRST STEP to the RIGHT SOLUTION**  
**of any LUBRICATION PROBLEM**



## **They even made a TASTE TEST of a SHELL RUST PREVENTIVE!**

**PROBLEM:** Specifications in contract for making U. S. Army cooking kettles called for a protective coating that came off easily with cold water. Absolutely no taste or odor could remain. The manufacturer preferred a coating to be applied by dipping at room temperature.

**SOLUTION:** When the Shell Lubrication Engineer surveyed the problem, he recommended a Shell Ensis Oil. As a test, this material was applied to utensils of the plant cafeteria. These were washed in cold water—then placed in normal use. *Not one employee could detect the slightest trace of the Rust Preventive used.*

**CONCLUSION:** It pays to consult the Shell Lubrication Engineer, regardless of the nature or size of your lubricating problem. Write for a copy of Shell's 40-page booklet on Rust Preventives. Shell Oil Company, Incorporated, 50 West 50th Street, New York 20, New York; or 100 Bush Street, San Francisco 6, California.



No one really cares what a Rust Preventive tastes like, but the maker of U. S. Army cooking kettles had to be sure that the Rust Preventive could be completely removed so that it would not taste!

# **SHELL RUST PREVENTIVES**

**OILS . . . FLUIDS . . . COMPOUNDS**

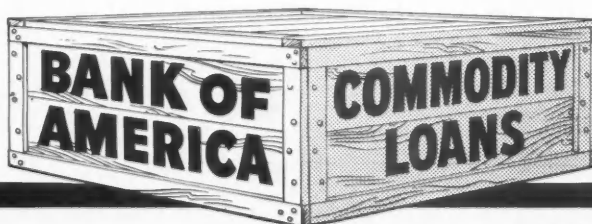




## **THERE'S CASH IN THOSE KEGS — as well as nails**

● "Open a keg of nails" with a Bank of America commodity loan—and you will get additional working capital! Which is just another way of suggesting that no matter what your commodity may be—if it is marketable—it is also good collateral for a loan. Bank of America maintains a special Commodity Loan Department which offers an experienced and prompt service to farmers, manufacturers and other producers throughout California.

**Convert your inventory into cash**

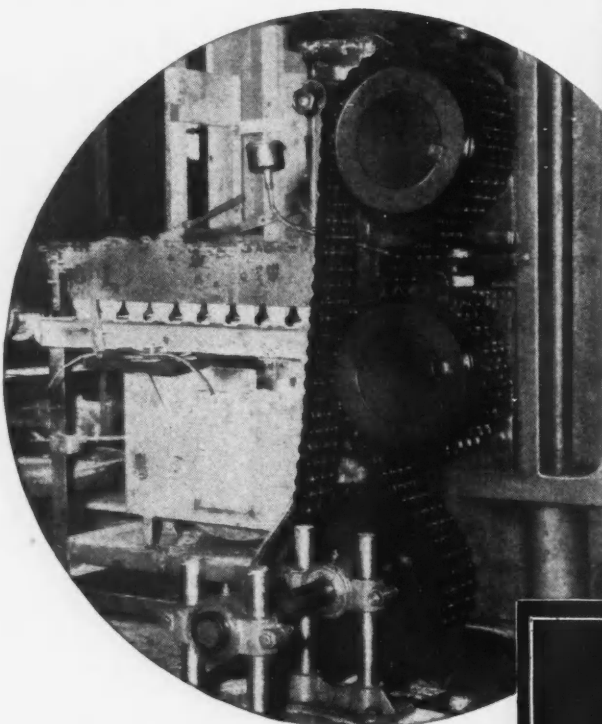


**California's statewide bank**

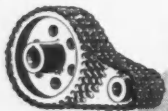
# DO YOU KNOW ROLLER CHAIN . . .

***is right for heavy loads!***

① **WITH ROLLER CHAINS**, working loads are distributed over a large number of sprocket teeth. Thus each tooth carries its proportionate part of the heavy load imposed, assuring far greater load handling ability in less space.



③ **AS THIS DRIVE DESIGN DIAGRAM** indicates, Baldwin-Rex roller chains can be flexed in two directions . . . an indication of their versatility. They are easily installed and maintained, and do not need adjustable centers for effective operation. This drive has given years of satisfactory service. Operating and maintenance costs have been unusually low.



Write for competent information and assistance on your specific drive problems, or for catalogs on Baldwin-Rex roller chains.

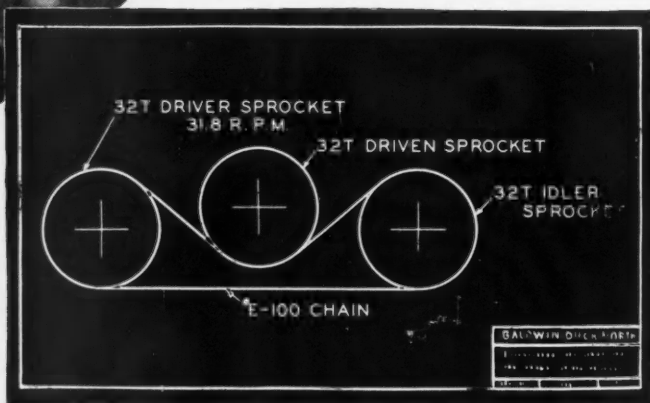
## BALDWIN·REX

### ROLLER CHAINS

BALDWIN-DUCKWORTH DIVISION OF CHAIN BELT COMPANY  
352 Plainfield Street, Springfield 2, Massachusetts



② **THIS CALENDER DRIVE** is a typical example of the ability of Baldwin-Rex roller chain to handle heavy torsional loads without the tremendous bulk of other types of drives. The natural elasticity of the chain plus the oil film between the working parts cushions tremendous shock loads. They're built to stand up under the toughest service without slippage.





## The NEW and REVOLUTIONARY PLASTEEL AIR CONTROL



### Not just VENTILATION . . . but positive AIR CONTROL for your Industrial Buildings

Out of the experience of years..and the technical and practical knowledge acquired in solving thousands of Industrial building atmospheric problems comes the new **PLASTEEL AIR CONTROL**.

Not just another ventilator . . but a positive "control." It gets heat, smoke and fumes out of your buildings rapidly and efficiently when you want it to . . controls the volume of exhaust to suit temperature and climatic conditions.

It eliminates structural disadvantages of past designs.

It provides heretofore unobtainable advantages of freer air flow . . maximum efficiency . . and greater economy in the finished installation.

When furnished in Plasteel . . that permanent material . . it resists corrosive conditions, weather and other destructive elements . . never needs painting or maintenance during the life of your building.

Obtainable in throat sizes 6 inches to 6 feet in any length to meet any building structural conditions and exhaust requirement.

Write, wire or phone for complete data.



## PROTECTED STEEL PRODUCTS

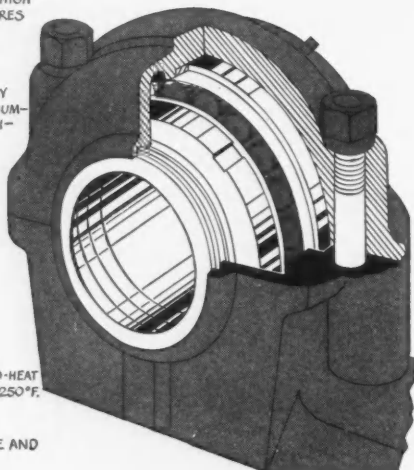
Standard Life Bldg., Pittsburgh, Pa. . Plant: Washington, Pa.

# STANDARD ENGINEERS NOTEBOOK



CALOL S.A. GREASE ASSURES  
GOOD LUBRICATION IN HIGH  
AMBIENT TEMPERATURES

CALOL S.A. GREASE MAY  
BE USED ON LOW-, MEDIUM-  
AND HIGH-SPEED ANTI-  
FRICTION AND PLAIN  
BEARINGS



WITHSTANDS RADIATED-HEAT  
TEMPERATURES OVER 250°F.

MINIMIZES DRIPPAGE AND  
LEAKAGE TROUBLE

## New grease lubricates in extra hot conditions

Developed especially for bearings that must operate in radiated heat, new Calol S. A. (sodium aluminum) Grease has proved satisfactory in temperatures over 250° F. It has been tested by many operators on working machines in the field. In addition, it was given a series of tests in the Navy Ball Bearing Machine, operated at 10,000 rpm, with bearing temperatures maintained at a high degree.

Calol S. A. Grease is made from a special type base and selected oils that give it high heat-resistant qualities. In use, these qualities assure minimum drip or leakage from bearings.

Although Calol S. A. Grease is ideal in a multiplicity of services, it is specifically adapted to the lubrication of low, medium and high speed anti-friction bearings used in all types of machines.

Made in three grades, 00, 0, and 1, by Standard of California, Calol S. A. Grease is available in 35-, 108- and 420-pound containers.

Standard Fuel and Lubricant Engineers are always at your service. They'll gladly give you expert service—make your maintenance job easier. Call your local Standard Representative or write Standard of California, 225 Bush St., San Francisco 20, California.

## Compounded Motor Oil keeps ring-belt cleaner

More power from the fuel consumed in gasoline engines can be obtained with RPM Compounded Motor Oil.

One hundred percent paraffin base, RPM Compounded Motor Oil contains a detergent or cleansing agent that loosens and removes deposits of sticky gum-carbon left on rings, pistons, cylinders and in the oil system by ordinary oils.

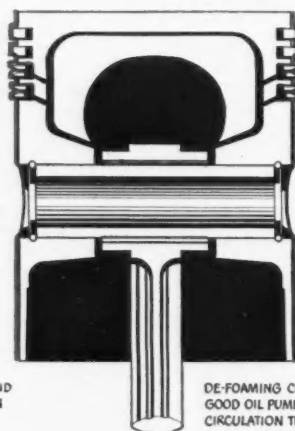
It keeps these parts cleaner, gives the oil unusual adherence to metal whether hot or cold, and therefore allows it to form a tight seal at the rings. This lets engines develop more power by preventing blow-by and excessive piston drag in starting and running.

A de-foaming compound in RPM Motor Oil eliminates the danger of air locks in oil pumps or oil pipes caused by bubbles. An adequate supply of oil is constantly delivered to working parts, reducing friction to a minimum. Other compounds in RPM Motor Oil resist oxidation, corrosion and sludge formation.

RPM MOTOR OIL CONTAINS SPECIAL CLEANSING  
AND ANTI-OXIDATION COMPOUNDS

RPM COMPOUNDED MOTOR OIL STICKS ON  
HOT OR COLD METAL—REDUCES STARTING  
AND RUNNING WEAR

DETERGENT KEEPS  
OIL-RING SLOTS  
UNCLOGGED—PRE-  
VENTS OIL-PUMPING  
AND BLOW-BY



RESISTS CARBON AND  
SLUDGE FORMATION

DE-FOAMING COMPOUND ASSURES  
GOOD OIL PUMP ACTION AND  
CIRCULATION THROUGH OIL PASSAGES

FOR EVERY JOB A **STANDARD OF CALIFORNIA** TEST-PROVED PRODUCT

# MORE BRANCH FACTORIES FOR THE WEST... A CURRENT TREND

**Horace Greely's "Go West Young Man" Applies to National Manufacturers Currently Studying Advantages of Plant Decentralization**

**D**ESIRE for decentralization may prove to be the magnet which will draw many national manufacturers to the West to set up branch factory operations, according to R. M. Alvord, Pacific Coast commercial vice-president of General Electric Company. With smaller manufacturing units management can become personally acquainted with employees, workers tend to become good citizens, and this is reflected in high productive efficiency.

He set forth G-E's own Western decentralization plans at the Northern California Management Conference at San Francisco in February as follows:

## Policy at Anaheim

The policy already has been put into effect through two Anaheim, California, units. One is a chemical plant already under construction where paint bases are

By R. M. ALVORD  
Pacific Coast Commercial Vice-president,  
General Electric

manufactured. The other is a new plastics unit soon to be started.

Plans call for almost doubling the present 2,000 California employees, through the new Anaheim and San Jose plants, and expansions at the Oakland lamp works and the Ontario flat-iron factory.

A combination of history, labor supply and manufacturing know-how made it possible to concentrate production of all of G-E's flat-irons at Ontario. Perhaps the biggest factor was decentralization.

The Oakland Apparatus Works was established to supply special motors for the pump manufacturers who were concentrated in California due to the use of irrigation on farms. Quick and intimate engineering contact and quick delivery were

the reasons. A natural sequel was adding allied electrical equipment such as distribution transformers and standard motors. His summary of the manufacturing situation was given as follows:

We need factories, but only on a sound basis. Otherwise we do harm not only to the West but to the national economy as well. Here are some points to consider:

## Important Factors

(1) Sound business thinking suggests that manufacturers in the West may not find it desirable to compete with plants which can manufacture more cheaply elsewhere.

(2) After balancing reasons why not against reasons why, if consumer markets, labor supply, raw materials and transportation facilities indicate volume production at competitive prices, then the answer is obvious—go ahead. Any other reason is nebulous, for no permanent benefit ac-

\* Among the factors resulting in the desire for decentralization which is bringing more branch factories into the West, the wealth of Western marketing areas is of prime importance. According to the table below, effective buying power per family in the three Pacific Coast states is the highest of all the state groups in the nation. Such a condition, coupled with a population growth that gives every evidence of continuing on an upward curve, makes it the part of wisdom for many firms to locate branch factories in the West.

—Courtesy San Francisco Chamber of Commerce

## COMPARATIVE MARKET DATA

Area 1	Total Population (1)				Gain or Loss (—) No. 6	Gain or Loss (—) % 7	1940 % of Urban to Total Pop. (2) 8	1939 (2) Millions 9	Retail Sales		Ratios 12	1944 Effective Buying Inc. Per Family (4) 13
	April 1, 1940 (2) Thousands 2	(2) Ratios 3	July 1, 1944 (3) Thousands 4	(3) Ratios 5					% Increase 10	1944 (4) Millions 11		
1 3 Pacific States (8).....	9,753	7.4	12,017	9.0	2,283	23.5	65.3	4,299	91.7	8,241	12.0	4,845
2 8 Mountain States (9).....	4,150	3.1	4,355	3.2	185	4.5	42.7	1,428	60.4	2,291	3.3	3,748
3 11 Western States (10).....	13,883	10.6	16,352	12.3	2,468	17.8	58.5	5,726	83.9	10,532	15.3	4,581
4 No. Calif., Ore., Wash.....	5,918	4.5	.....	.....	.....	.....	58.0	2,565	95.3	5,009	7.3	4,758
5 So. Calif., Ariz., New Mexico.....	4,846	3.7	.....	.....	.....	.....	68.7	2,021	83.3	3,704	5.4	4,696
6 New England States (11).....	8,437	6.4	8,280	6.2	—157	—1.9	76.1	3,318	62.7	5,397	7.8	4,841
7 3 Middle Atlantic States (12).....	27,539	20.9	26,048	19.6	—1,492	—5.4	76.8	10,292	47.0	15,131	22.0	4,693
8 5 East North Central States (13).....	26,626	20.2	26,392	19.9	—234	—0.9	65.5	9,251	62.7	15,053	21.9	4,343
9 7 West North Central States (14).....	13,517	10.2	12,443	9.3	—1,074	—7.9	44.3	4,139	54.6	6,397	9.3	3,634
10 8 South Atlantic States & D.C. (15).....	17,823	13.5	19,302	14.5	1,479	8.3	38.8	4,369	79.7	7,853	11.4	3,543
11 4 East South Central States (16).....	10,778	8.1	10,494	7.9	—284	—2.6	29.4	1,845	72.1	3,176	4.6	2,559
12 4 West South Central States (17).....	13,065	9.9	13,253	9.9	188	1.4	39.8	3,101	71.3	5,311	7.7	3,134
13 United States .....	131,669	100.0	132,563	100.0	894	0.7	56.5	42,042	63.8	68,851	100.0	4,061

(1) Rounded off to nearest thousand.

(2) U. S. Census Bureau.

(3) Armed forces overseas excluded.

(4) Copr. 1945, Sales Management Survey of Buying

Power; further reproduction not licensed.

(5) For implements and machinery.

(6) As of April, 1944.

(7) Civilian population as of Feb. 15, 1944 in thousands—Napa, 39.3; Sacramento, 188.2; San Joaquin, 151.8; Santa Clara, 191.8; Sonoma, 75.0; Yolo, 27.8.

(8) Calif., Ore., Wash.

(9) Mont., Ida., Wyo., Colo., New Mex., Ariz., Utah, Nev.

(10) Pacific and Mountain States.

(11) Maine, N.H., Vt., Mass., R.I., Conn.

(12) N.Y., N.J., Pa.

(13) Ohio, Ind., Ill., Mich., Wis.

(14) Minn., Iowa, Mo., N.D., S.D., Neb., Kans.

(15) Del., Md., D.C., Va., W. Va., N.C., S.C., Ga., Fla.

(16) Ky., Tenn., Ala., Miss.

(17) Ark., La., Okla., Tex.

crues to labor or to stockholders or to the West.

(3) Perhaps a straight assembly type of operation is the answer. Our Oakland Lamp Works gives a clue. Mass low cost production of component parts is required, parts which must be done on automatic machines costing thousands of dollars which turn out a million parts a day. The market for the finished product dictates an assembly plant at Oakland but only when the component parts are made elsewhere.

(4) Decentralization indicates added factories for the West.

(5) Many companies originated here. They started out to take care of a definite local need. They have products peculiar to a specific area. Then through normal expansion of products and markets they increased their operation to one nationwide in scope. Food Machinery Corporation is an example.

(6) Regarding creation of jobs, nationally half of all gainfully employed people are in trades and services. If you eliminate from industry's half, that percentage of people working in agriculture and mining, the total industry employment represents only about one-fourth of

the total gainfully employed.

It is well established that when the percentage of peoples in trades and services is high, the standard of living is likewise high. For example, California enjoys a very high standard of living, probably the highest in the country on an average. Here is proof: with only 5.2 per cent of the national population in 1939, California had 7.6 per cent of the retail sales. This is 50 per cent higher than the national average.

The eleven Western states in 1944 had 12.3 per cent of national population yet made 15.3 per cent of the nation's retail purchases. California has about 65 per cent of all gainfully employed in trades and services.

### More Activity Needed

My thought is, therefore, to enjoy a continued and expanding high standard of living we need expanding industrial activity, soundly planned and operated. The people in trades and services in this area are a big market for the products of our manufacturing plants, and who will sell and service the products made here.

More people employed in factories, more products made, requires more people selling and servicing these products. Take the automotive industry as a concrete example, a few hundred thousand working actually on the assembly lines or in management provide millions of jobs through service stations, garages, automobile dealers, automotive parts, wholesalers, and the like.

It therefore, is good for everyone—it is the economic cycle at work. The ratio is clear: for every two employed in industry three must be in trades and services. Get this ratio into the 100,000 brackets and you really are on the way to full prosperity in the West.

### Expansion Seen

(7) Western industry will expand. Perhaps past events will indicate why. The 1915 world exposition held in San Francisco brought leaders of industry from all over the U. S. They saw for themselves what could be done in the West and why.

The same thing happened again during the World's Fair in 1939-40 in San Francisco. Then war came and with it tremendous production of ships, planes and war goods from San Diego to Seattle and into the Rocky Mountains.

After 1915 and 1939 industrial activity increased. History will repeat for we now have increased population and labor supply.

(8) The goal of Western industry must be more goods for more people, at less cost. No other attitude or program will give us what we must have, i.e., full employment and hence full prosperity. The reason is obvious: the consumer, who is the final boss of all industry, won't permit it.

\* As indicated on the chart below, national manufacturers, shipping to many points in the 11 Western States from their plants located in Pacific Coast industrial centers, would enjoy rate advantages over shippers from Eastern points to same destinations.

### WESTERN AND EASTERN ADVANTAGES IN FREIGHT RATES

(Copyright, 1946, San Francisco Chamber of Commerce)

Class 5 in cents per 100 lbs. by rail, carload lots. Class 5, when commodity rates do not apply, includes bags or bagging; boxes, fibreboard (corrugated KD flat or folded flat); canned goods and foodstuffs; cereal food preparations; glassware, other than cut; hardware (excluding tools); iron or steel articles, structural (fabricated or unfabricated); oils (other than petroleum); paints and paint materials; paper and paper products (not printed); petroleum or petroleum products; roofing and building materials; seeds; wallboard.

	Between and	San Francisco	Los Angeles	Portland	Seattle	Group A Points Northeast & Middle Atlantic	Group B Points Ohio Terr.	Group C Points Indiana- Michigan Terr.	Group D Points Illinois- Wisc. Terr.	Group E Points Iowa, Mo., Ark., La. Terr.
<b>ARIZONA</b>										
Phoenix		80	54	133	141	272	259	239	232	219
<b>CALIFORNIA</b>										
Bakersfield	31½	18	86½	93½	314	305	290	284	271	
Berkeley	3¾	31½	55	62	314	305	290	284	271	
Fresno	24	28½	79	86	314	305	290	284	271	
Glendale	31½	5	84	92	314	305	290	284	271	
Long Beach	31½	12	79	87	314	305	290	284	271	
Los Angeles	31½	—	79	87	314	305	290	284	271	
Oakland	3¾	31½	55	62	314	305	290	284	271	
Pasadena	31½	5½	84½	92½	314	305	290	284	271	
Richmond	3¾	31½	55	62	314	305	290	284	271	
Sacramento	17	31½	69	76	314	305	290	284	271	
San Bern'do	40½	10	89	97	314	305	290	284	271	
San Diego	46½	17	84	92	314	305	290	284	271	
San Francisco	—	31½	55	62	314	305	290	284	271	
San Jose	9	31½	63½	70½	314	305	290	284	271	
Sta. Barbara	31½	15	86½	93½	314	305	290	284	271	
Sta. Monica	31½	6	85	93	314	305	290	284	271	
Stockton	14	31½	68	75	314	305	290	284	271	
<b>COLORADO</b>										
Denver	217	217	217	217	7)163	6)109	5)108	4)105	3)101	
Pueblo	217	217	217	217	7)163	6)116	5)109	4)109	3)99	
<b>IDAHO</b>										
Boise	167	175	100	116	276	260	251	243	236	
<b>MONTANA</b>										
Butte	163	163	140	140	7)226	6)193	5)180	4)168	3)176	
Great Falls	163	163	140	140	7)219	6)177	5)164	4)154	3)161	
<b>NEVADA</b>										
Las Vegas	86½	55	134	142	314	305	290	284	271	
Reno	33½	57	86½	93½	276	260	251	243	236	
<b>NEW MEXICO</b>										
Albuquerque	132	102	181	189	7)173	6)152	5)144	4)125	3)115	
<b>OREGON</b>										
Portland	55	79	—	38	314	305	290	284	271	
<b>UTAH</b>										
Salt Lake	123	123	125	141	7)181	6)161	5)152	4)150	3)147	
<b>WASHINGTON</b>										
Seattle	62	87	38	—	314	305	290	284	271	
Spokane	112	143½	77	77	276	260	251	243	236	
Tacoma	62	87	38	22	314	305	290	284	271	
<b>WYOMING</b>										
Cheyenne	217	217	217	217	7)161	6)114	5)106	4)103	3)99	

3) St. Louis. 4) Chicago. 5) Detroit. 6) Pittsburgh. 7) New York.

Data Source—Transportation Department, San Francisco Chamber of Commerce.



# Atomic Bombs May "Boil Out" Shale Oil

**P**OWER to turn the wheels of Western Industry may come from vast unexploited deposits of shale oil, made available through a properly designed atomic bomb.

Raymond G. Osborne, Los Angeles testing engineer, has applied for a patent covering this potentially significant development. Apparently the first inventor to offer a commercial application of atomic fission to industrial problems, Osborne sees in the cataclysmic temperatures thus generated an answer long sought by geologists and engineers.

In June, Dr. Vannevar Bush is to survey the possibilities of expanding the activities of the Hanford atomic bomb plant, according to an announcement by U. S. Senator Warren G. Magnuson, who advocates Hanford as a center for commercial atomic research.

Many efforts have been made to discover economical means of stripping oil shale of its petroleum content, but the stumbling block always has been the difficulty of handling huge quantities of the porous rock, often located at great depths.

Oil shale, found in the bottom of prehistoric oceans, is impregnated with wax-like hydrocarbon. If heated to about 700 degrees Fahrenheit, this hydrocarbon is converted from a solid into several products, mainly shale oil, combustible gas, and residual carbon.

Shale has been mined for many years in Scotland, and the oil extracted by heating, but the labor involved makes this method practicable only where the deposits are shallow and petroleum prices are very high.

Osborne, who like many others, including the U. S. Bureau of Mines, had been seeking an answer to the problem, had visualized some sort of furnace that could be lowered to the required depth, but he had not solved the problem of proper heat insulation, oxygen supply, and other difficulties of creating and controlling a flame at a depth of several thousand feet below the surface.

It occurred to him that the enormous energy contained in a very small amount of fissionable material might be released in a manner that would heat the entire shale formation to the required temperature. The oil thus released could then be pumped out in the conventional manner.

Osborne makes no claim as to immediate practical application of this principle, stating that many technical difficulties yet remain to be solved. Overheating the shale, for example, would doubtless break down

the oil content just as overcooking can burn up a roast. The heat might be regulated by controlling the amount of material in the bomb, or by governing its speed of reaction. Or perhaps the new method said to "denature" fissionable material by removing its explosive propensities might prove the solution to this problem. At any rate, Osborne hopes the proposal will stimulate other minds to further discoveries—not at once, perhaps, but within decades to come.

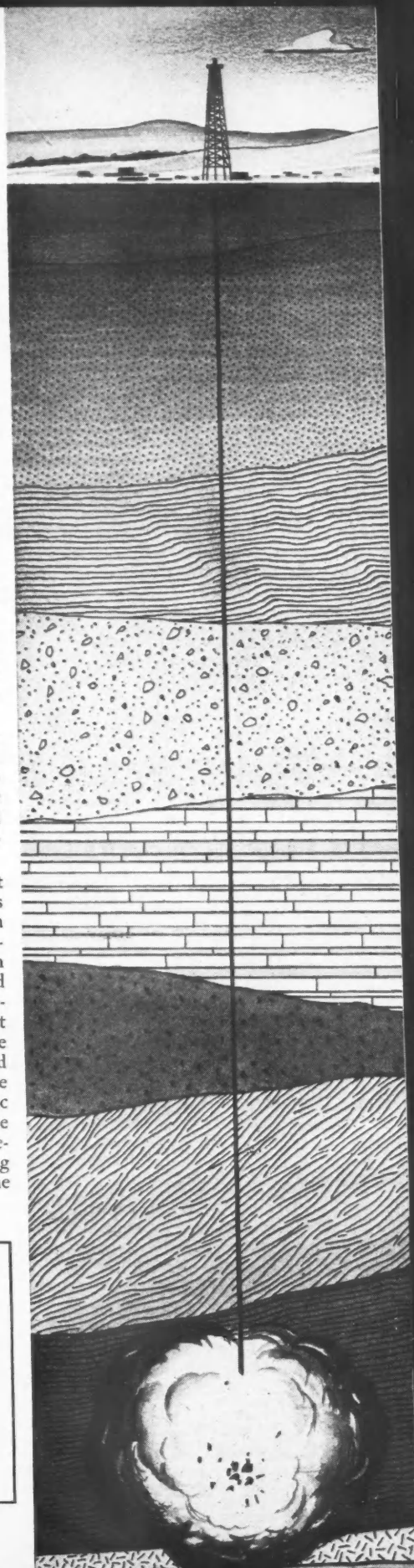
"It is better that atomic power should come by evolutionary stages, rather than by a sudden revolution that would wreck our economic system and cause universal hardship," he declares.

Yet the decline of known oil reserves, year by year, emphasizes the ultimate need for exploiting new power sources, and it has been estimated that shale deposits in the United States contain enough petroleum, if liberated, to equal this nation's oil production at peak levels for a century to come.

In fact, Osborne remarks, "exploitation of shale might even avert international wars by removing a common cause of dispute over national resources. Russia, for instance, has enormous deposits of oil shale within her borders as do other countries also."

A very interesting possibility is that atomic heating of subterranean formations might liberate petroleum locked up in many wildcat oil wells that failed to develop commercial production, as well as in some producers that have been abandoned as worked out. Osborne draws some support for this theory from the fact that most producing oil structures contain shale which probably never has been stripped of its petroleum content. If the whole structure could be "boiled out" by atomic heat, this residue could be recovered. The ideal way would be a sustained atomic reaction which would smoulder for a long period, permitting gradual release of the oil from the shale.

Scientists of M.I.T., speaking before the American Chemical Society recently, have described experiments based on the theory that radioactivity of minerals has caused atomic processes which in turn have resulted in the formation of oil. They also told of experiments conducted by the American Petroleum Institute in which chemicals occurring naturally in oil fields were bombarded with atomic particles from a cyclotron with resultant reproduction of one of the main constituents of petroleum.





\* Such a scene as the above is not yet typical of job training programs in industry, but apparently the day will soon come when it will be. In the ranks of industry, both in the West and elsewhere, Shell Oil Company is among the first to make the tremendous use of visual aids in the job of training workers called for by present conditions. In commercial fields the same increased use of visual aids is presently being spearheaded by Hale Brothers in San Francisco, one of the West's largest and most progressive department stores.

## Workers Learn Quickly If They Can See How Its Done

*In itself, visual education is nothing new, but its current acceptance by industry presages a new day in job training*

USE of visual aid techniques in training workers for both business and industry of the West is now entering upon its greatest period of peacetime development.

The development is the result both of widespread recognition of what visual education can do in cutting down learning time, and improvements in the techniques themselves.

Just how great the use of visual education is to be may be seen, industrially, in the training programs currently employed by such firms as the Shell Oil Company, and commercially, by Hale Brothers department store of San Francisco.

Though both of these organizations have long laid great emphasis on the necessity of carefully devised and executed programs for employee training, neither of them has made in the past the wide use of pictures that is theirs currently.

In the case of the Shell Oil Company, whose employee training program involves the instruction of literally thousands of

workers, visual education involves a comprehensive use of cartoons, charts, diagrams, slides and motion pictures.

Outside of the increased extent to which all these various media are used today the most salient differences between present techniques and those played by visual education in employee training before the war consist of two things: a realization of the comparative value of each of the media and the increased use of projected still pictures.

### Movies' Limitations

What is meant by realization of comparative value of media is most clearly shown by the present use made of motion pictures. In the Shell training program motion pictures play an important part, so important that the company has a separate department devoted to their production. At the same time, those in charge of the program clearly realize the limitations of motion pictures for educational purposes.

Briefly, they realize that unless motion

itself is to be shown the movies have an over-emphasized value in production job training. Primarily, the movies appeal to the emotions, as one Shell executive said. Hence, the use of motion pictures in teaching *how* to do many production jobs is nowhere near as important as it is in the fields of public relations and sales.

Why this is true may be seen in the following criticism contained in a recent report by California science teachers of their findings in preparation of an analysis of desirable types and specifications of teaching materials to be prepared by industry. The analysis was conducted under the sponsorship of the National Science Teachers Association and the National Better Business Bureau. Though this analysis was prepared with a view to its use in selecting materials for teaching science in schools, the conclusions drawn are equally applicable to teaching job-operations in industry.

On the use of motion pictures the analysis said "ideas and concepts are pre-

sented in such a machine-gun fashion that students get little more than entertainment from them." And again, "in all cases where motion is not required, motion film should not be produced."

The analysis, of course, does endorse "use of motion pictures when animation, time-lapse photography, actual motion, slow motion action, etc., are desirable."

Such remarks indicate the comparative evaluation of visual education media that is going on by means of which the proper instrument is being chosen for doing a given job. But important as that is, it is not more important than developments in using devices which project a still picture, such as the Visual-Cast.

What the Visual-Cast is—and the fact that Shell Oil Company has purchased and is operating 25 of them in the training of 1800 dealer-employee set-ups in the West indicates its value—is nothing more than a small box-like device from which a picture is thrown on a wall or screen.

### What It Does

Essence of what it can do is that through its use less distraction from what the teacher is saying, and the picture he is showing, occurs than is the case with other types of projection instruments that don't perform similarly. A darkened room is completely unnecessary. The operator of the machine is also the instructor of the class. The total amount of work required for operating the machine, other than the effort involved in turning on the switch, is that of picking up slides, generally of 8 by 5-inch dimensions and of possibly an ounce in weight, placing them on the

lens in the top of the box, and removing them and replacing them as desired.

Obviously, if the instructor has his slides stacked in order before he begins his lecture, the actual manipulation of the machine need interfere in no way with the flow of his instruction. There is no necessity for him to face the screen or wall on which the image appears. If he wishes to point to some part of the picture he merely does so with a pencil on the slide and without turning his back to his audience. The images of the marks made by the pencil, and of the pencil itself, are cast on the screen. The pencil marks can be quickly erased with a cloth.

Use of this device is not restricted to black and white. A wide variety of colors can be used and no additional equipment is required. The only condition for projection of color is that the colored inks used in drawing the picture on the slide be transparent. If they are, their color is projected in the image cast on the wall or screen.

Probably the most dramatic use of the Visual-cast lies in the projection of overlays, an outgrowth from the isogonic overlays first produced by Nelson E. Bohall who evolved isogonic drafting and geometry, as *Western Industry* first reported last August.

### Use of Overlay

As seen in the accompanying illustration, an overlay is a series of slides superimposed one upon the other, but attached to each other in such a way that each can be turned back revealing on the screen the next picture. Each slide is in exact register with the others.

By means of the overlay a picture of the foundations of a house, for example, can be thrown on the screen, and then, as the students watch, the walls and roof can be added in turn until finally the completed structure appears.

Such a technique is an invaluable addition to visual training methods. In the study of an automobile engine, say, the student by means of the overlay can actually see just how the various parts fit one into the other and how they look in relation each to the other as they are put together.

### Aid in Instruction

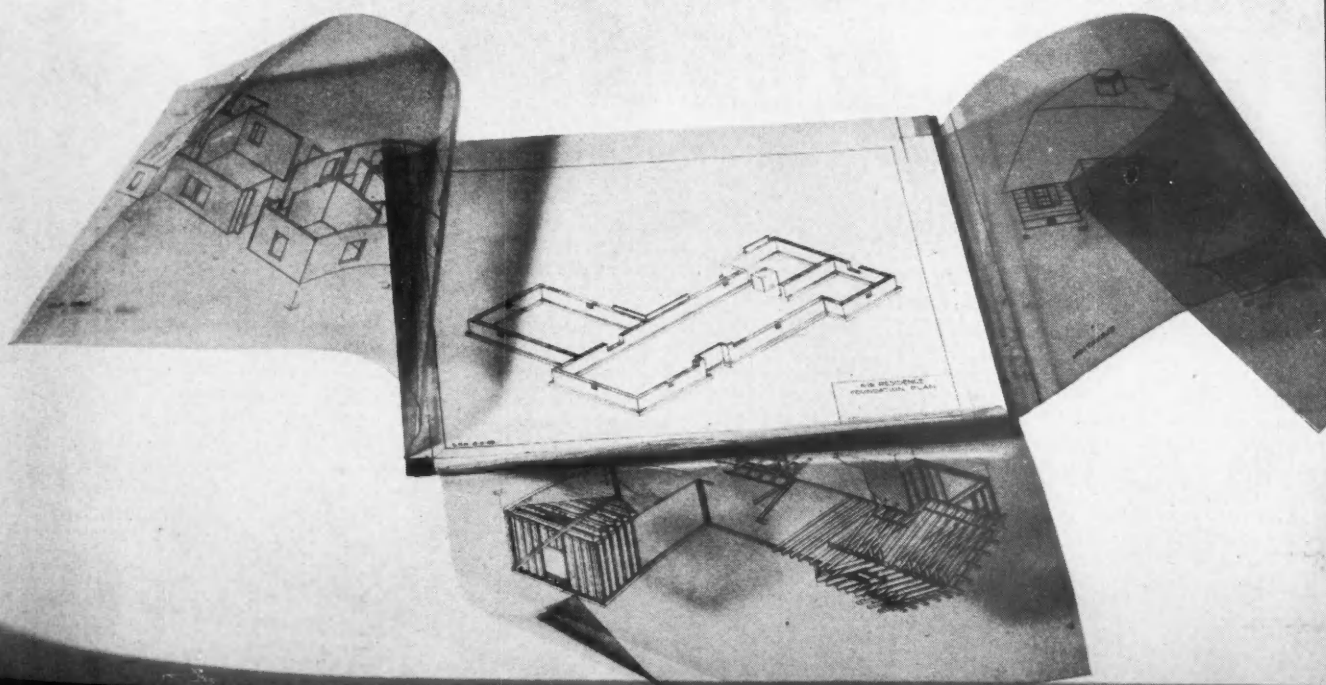
Since the instructor can pause at any slide, or turn back to it merely by the simple act of turning back the slide itself, there is no difficulty in varying the time required for the lesson in any given picture to sink into the mind of the student.

Heart of the difference between the overlays and slides devised by Bohall for use on the Visual-Cast and other slides used in projection equipment lies in their manipulation.

Bohall's equipment, now being produced by Isogonica, Inc., in San Francisco, can be mechanically manipulated at the will of the instructor without its removal from the projector. Through this manipulation, the pictures cast on the screen receive the action, depth and form that enable them to convey their lesson most forcefully to the minds of those in the audience.

While visual aids have had a varying use by industry in the past both in the East and West, their use in purely commercial operations in the West, such as de-

\* By means of the isogonic overlay pictures of an object, either completed or in various stages of its development, can be exhibited in such a way that the student can very easily grasp the relationship between the stages. Thus, learning time is substantially reduced.





partment store merchandising, have been greatly neglected.

The day of their neglect in this field, however, is rapidly drawing to a close. In San Francisco, Hale Brothers Stores, Inc., who operates a chain of department stores in Northern California, are going in heavily for visual education in their expanded educational program. The program includes all employees from executives on down to salesgirls.

Miss Jean Coman, heading the program that is virtually unique in the field of department store merchandising operations in the West, holds that "visual training methods should be used wherever possible." According to her, "the old adage that one picture is worth a thousand words is still true." Not only that, but it is especially applicable to merchandising operations.

#### Hale Bros. Program

Here again, however, special importance is attached to selection of the right kind of visual aid for a specific job. Accordingly, training operations will comprise the use of all types of visual aid techniques including motion pictures, the use of sound-slide films—an adaptation of sound to still pictures—slides operated by such

devices as the Visual-Cast, and simple charts, graphs and line drawings.

But job training, sales and public relations are not the only fields in which the proper visual education techniques are of value to business and industry.

#### Public Schools

Though the training students receive in grammar and high school does not have a direct relationship to business and industry in the sense that a knowledge of the Pythagorean theorem has never aided a man to run a punch press or greet a customer, school training is of a direct and vital interest to those who will employ today's students in tomorrow's jobs.

To quote again from the analysis of desirable types and specifications of teaching materials, it is "impossible for text books to keep pace with the advance of modern science."

Accordingly, if industry and business wish the best possible basic training for future recruits, they should encourage public schools to keep pace with the needs of the age in which we live.

Most effective way to accomplish this is through advocacy of the widest possible use of visual education techniques in the field of public education.

#### Western States Council Lays Down Policies

Western States Council held its second annual meeting at Butte, Montana, March 17 and 18, and adjusted its policies to meet more clearly the demands of the 11 Western states. Rather than entering into controversial matters, such as the promotion of light metals as opposed to copper, lead and zinc and other competing items, it was determined that the Council should concentrate on matters of vital concern to all of the area.

Such matters of common interest were named as the decentralization of industry in the West, development of reclamation programs, working out a definite public lands policy for the West, the cooperative development of tourist business for the West in competition with Mexico, South America, Europe and the Orient when accommodations will be available.

Harold B. Wright, general manager of the Los Angeles Chamber of Commerce, was elected president to succeed Christy Thomas of the Seattle chamber. Vice-presidents are F. W. Mathias, manager of the Olympia Chamber of Commerce, who was secretary last year, and Don B. Keim, manager of the Colorado State Chamber of Commerce. Gus Backman, manager of the Salt Lake City Chamber of Commerce, is the new secretary-treasurer. He was first vice-president last year.

#### New Firm Sows Seeds by Plane

A firm that so far has no competitors, the International Seed Pellet Company of San Diego, is now working on a contract with the Department of Interior to seed 50,000 acres of land with grass from the air.

In sowing the 50,000 acres the contract calls for a disposal of only a half a pound of seed to the acre. Since the seeds run 7,000,000 to the pound the disposal will be fairly heavy despite the small weight involved. Rate of sowing by means of plane will be 241 acres per minute.

#### Northwest Conference

A Pacific Northwest marketing conference will be held at the Olympic Hotel, Seattle, May 23-25, to discuss marketing and distribution problems for the Pacific Northwest states and British Columbia. Dr. Nat H. Engle, director of the Bureau of Business Research, University of Washington, is general chairman of the conference committee, and representatives from about 30 trade associations, chambers of commerce, universities and colleges of business administration in the area are serving on a regional advisory council. Hotel reservations and registration for the meetings are being handled by the conference secretary, Robert C. Story of the Seattle Chamber of Commerce.

## How One Firm Tackles Its Housing Shortage

**L**AST MONTH'S issue of *Western Industry* carried a cartoon showing industrial development in the West tied down by lack of housing.

Here is what Fibreboard Products Inc. did to throw off the fetters so that operation of its subsidiary's new glass factory, now under construction at Antioch, California, would not be hindered by a labor shortage resulting from inability to house the approximately 300 workers needed.

1. It launched an advertising campaign in the local newspaper in which it pointed out the company's interest in the Antioch community and how its needs for housing paralleled those of the community itself.

2. As a result of its campaign there was an immediate response from contractors who practically stepped on each others' toes in buying up land in and around Antioch for development as subdivisions.

3. Minton and Kubon, San Francisco contractors, acquired 30 acres of land on the outskirts of the city, and Russell P. Catiline, Pittsburg contractor, followed with the purchase of 21 acres adjoining the city limits.

4. Soon afterward, the San Francisco

firm of Swinerton and Walburg bought 11 blocks of land in the city limits owned and used by Fibreboard for storage of straw, the raw material employed by the company's Antioch mill.

5. With their newly acquired property Swinerton and Walburg started laying out a real estate development involving 120 houses and a playground. The two other contracting firms, as fast as the legal steps involved in annexing their property to the city could be taken, got plans under way for the construction of 302 houses.

6. Net result of Fibreboard's advertising campaign designed to solve the company's need of housing for its workers is that construction has started on 422 houses, all of which are expected to be completed by next October well in time for the opening of the new glass factory.

7. Though the firm sold its straw storage space for part of the housing development, it has since succeeded in acquiring acreage for that purpose, and the transfer of the heavy burglar-proof fencing, as well as the complicated fire fighting system and water lines needed to protect the storage area, has been completed.



# Spokane Exhibit Reveals Manufacturing Opportunities

**M**ANY evidences of success in drawing attention to the possibilities of the Inland Empire market for products which could be made in the area were reported from the Inland Empire Manufacturing Opportunities Exhibit held in Spokane early in March.

It was not intended to exploit products now manufactured or processed in the area, but rather to encourage the expansion of existing industries and to stimulate the development of new ventures. A total of 1,946 persons attended, with 457 of these registering. Of those who registered, 67 asked aid and advice on marketing, product design and patent availability for approximately 100 of the more than 1,000 items displayed.

Two products that definitely could be made in the Inland Empire with success were revealed as a result of the exhibit.

The first was tie pins for railroads, the other an automatic sprinkling device that will turn on and off at stated intervals.

Although light metals were prominently displayed, because of the interest along this line being greatly stimulated by the recent leasing of two large aluminum plants here for operation by the Henry J. Kaiser Company, a wide range of other products was also covered.

Items included were those which had been appraised by qualified technical groups as offering the greatest opportunities in the light of such factors as availability of raw materials, types of labor skills required and the cost of the necessary machinery and equipment.

Starting with the Bureau of the Census list of over 6,000 manufactured articles or classes of products, committees of purchasing agents, buyers and storekeepers

representing the major segments of consumers, such as the agricultural and farm groups, jobbers and retailers, construction industry, mining industry, wood products industry, railroads and public utilities, checked more than 600 as items they used in quantity but could not obtain from local manufacturers.

The technical groups then eliminated those items for which the raw materials, specialized labor skills or machinery requirements created barriers to successful competitive manufacture in the Inland Empire. After the further elimination of those products already amply made in this area, the list contained some 350 items or classes of products that were qualified for representation in this exhibit.

Further screening eliminated those items which appeared to be adequately provided by local manufacturers.

A subcommittee of the Industrial Bureau of the Spokane Chamber of Commerce, which sponsored the show, is now engaged in screening the requests for aid in an effort to render further assistance.

• Out of exhibits such as these, Western manufacturers find additional products which they can produce in their plants. Products displayed at the Spokane exhibit were those for which not only does a heavy demand exist in the area, but also the production facilities and various raw materials which are necessary for their manufacture.

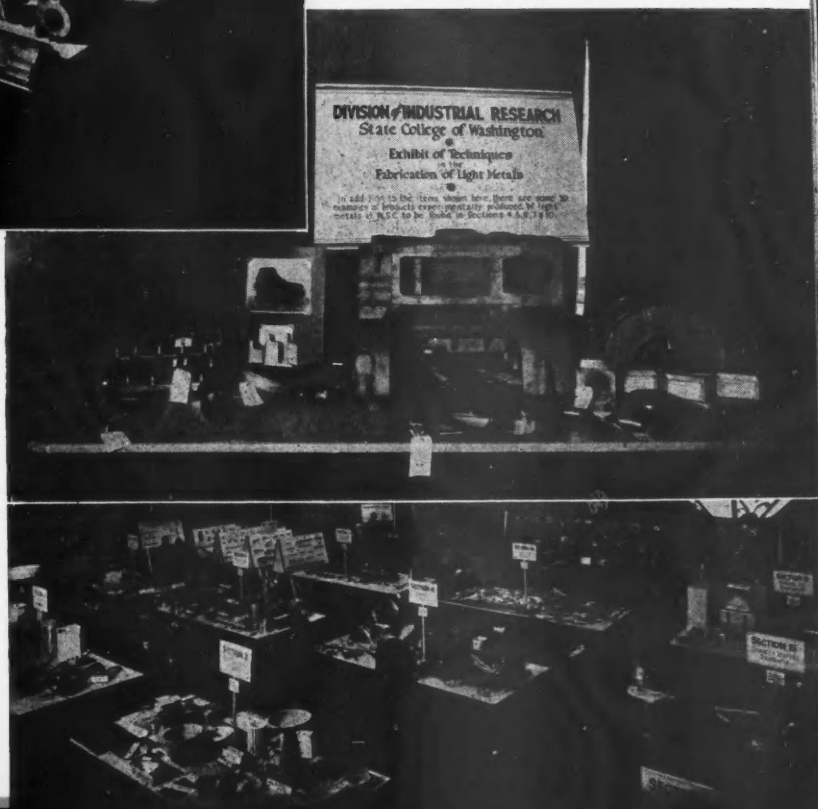


## Montanans Hold An Industrial Exhibit

Another indication of how exhibits are being used to focus attention on the industrial possibilities of the West appears in the March display of products held at Helena, Montana.

Like the Spokane exhibit, that held at Helena in the branch of the Federal Reserve Bank, was widely publicized and heavily attended.

Products of over ninety producers and processors, collected by the Industrial Development Division of Montanans, Inc., the state chamber of commerce, gave impressive evidence of the growing industry of Montana, third largest state in the Union.



ONE of the most unusual features of the National Supply job evaluation installation is the manner in which it was installed.

In April, 1942, the Company started two industrial engineers, Cleon Lloyd and the writer, to work on the job of describing and evaluating all jobs in the plant. At that time we selected a committee which was to serve as the Company job evaluation committee and which represented by its total experience all of the occupations in the factory.

The evaluation committee consisted of R. M. Garbe, superintendent of machine shops, forge shops, heat treat, and assembly shops; J. O. Bishop, master mechanic; G. A. Hatfield, assistant to the plant superintendent; S. E. Eklund, tool supervisor, and C. J. Hogle, superintendent of the foundry.

As each department of jobs was written,

• With use of such a job record sheet as this, National Supply Company was able to arrive at a careful, accurate evaluation of jobs carried on in all factory departments.

# Both Management And National Supply's Plan

By KARL E. HANSEN  
Chief Industrial Engineer  
National Supply Company, Torrance, California

the department jobs were submitted to this committee for criticism and approval of the exactness of all statements. At this point in the program, no jobs were point rated. This is particularly important because it allowed the committee to consider the accuracy of the job description without any influence whatsoever with respect to present rates paid or proposed rates paid.

After all departments were completely described, the committee picked out 29 key jobs which were easily defined, well-known and commonly found in the surrounding area.

The industrial engineers carefully evaluated each of the 29 jobs in accordance with the National Supply job evaluation plan and set up a ranking list for each factor on each job in the key job list. Thus, for the factor of training and experience, we would list all jobs in the key job list in the order of their ranking for this factor, placing the job requiring the most training and experience at the top of the list, the job which required the least training and experience at the bottom of the list and sorting all of the rest of the jobs in between the top and the bottom in the order in which they were evaluated.

All 29 jobs were sorted in this manner on all 13 factors. The factor ranking list, then, plus the individual job descriptions as evaluated, were submitted to the job evaluation committee and they, in light of their experience, criticized, corrected and finally approved the point values assigned to each factor for each job.

The industrial engineers then took these key jobs as written, and evaluated them, and from them rated all other jobs in the plant according to the point system of the National Supply Company job evaluation plan. All jobs were then listed in accordance with their ranking by total point values assigned each factor. This, in turn, was submitted to the job evaluation committee for final approval.

It took about a year to accomplish the preceding work. The writer then asked the chairman of the National Supply unit of the Oil Workers International Union, C.I.O., to choose a job evaluating committee to represent the Union.

The Union was requested to select the committee so that its caliber would be similar with respect to experience to the Company job evaluation committee. Accordingly, the Union selected Bob Lessing, tool and cutter grinder; Tommy Brennan, inspector; Fitzgerald, machinist; Elmer Moon, welder, and Matt Libeu, inspector, as the committee to study the proposed rate structure program.

This Union committee took the 29 jobs, plus a few other jobs selected at random, and carefully studied the description and evaluation of each. In so doing, the Union committee members went out to the man currently employed in the job selected,

THE NATIONAL SUPPLY COMPANY		FORM NO.
JOB RECORD		Sheet _____ of _____
TORRANCE PLANT	DESCRIPTION AND SPECIFICATIONS	Job No. <b>AB 0655 E</b>
Machine Shop Dept.		Job Name <b>Engine Lathe</b>
Nov. 22/43 Date		Alt. Name <b>Oper., Heavy - 3</b>
<b>FUNCTIONS AND GENERAL SCOPE OF JOB:</b>		
(Use extra sheet if necessary)		
Set up and operate assigned large engine lathe as prescribed to rough and semi-finish turn and face such items as large multiple diameter shafts and swivel sleeves, ranging in size up to 20 tons where tolerance is not less than $\pm$ or $- 1/64"$ . Experience required to grind a few simple heavy lathe tools for steel and cast iron materials and to adjust off center forgings to remove flaws in steel.		
<b>Work Performed:</b>		
Receive instructions from tracer card, blue print and foreman.		
Lay out and drill centers in end of steel forgings by use of portable drill.		
Set up assigned engine lathe (10% of time).		
Center work in independent chucks by chalk method.		
Grind some simple cutting tools and flat drills.		
Select proper feed and speed over limited range.		
Operate assigned engine lathe as prescribed to rough and semi-finish turn and face such items as multiple diameter shafts, swivel sleeves, and sube ranging in size up to 20 tons where tolerance is not less than $\pm$ or $- 1/64"$ .		
Oil, clean and inspect lathe daily and report condition to foreman.		
<b>Equipment Used:</b>		
Large engine lathes, stand grinder, portable air drills, limited variety of cutting tools. Worker supplies such items as calipers, scale, center punch and hammer.		
<b>REQUIRED INDIVIDUAL QUALIFICATIONS</b>		<b>JOB DATA</b>
Male <input type="checkbox"/> Female <input type="checkbox"/> Color <b>N.P.</b>		Permanent <input checked="" type="checkbox"/> Seasonal: % of year _____
Height: <b>N.P.</b> Weight: Light <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Heavy <input type="checkbox"/>		Method of payment: Hourly <input checked="" type="checkbox"/> Salary <input type="checkbox"/>
Age: <b>18</b> yrs. to <b>55</b> yrs.		Day <input type="checkbox"/> Bonus <input type="checkbox"/>
English: Speak <input checked="" type="checkbox"/> Read <input type="checkbox"/> Write <input type="checkbox"/>		Hours of Work: _____ per day
Education: Must have <b>Grade school</b>		_____ per night <b>2</b> per turn
Further (helpful):		Shifts change every _____
Experience: <b>1 year oper. medium engine lathe</b>		Supervised by (Job Name): _____
For detail see specifications on reverse side.		Jobs usually advanced to 1. _____
Special Qualifications:		2. _____
		Jobs usually advanced from 1. _____
		2. _____

# Union Put Approval On For Evaluation Of Jobs

discussed the job description and its point evaluation with the actual men on the jobs and finally returned to the joint meeting with the Company job evaluation committee to discuss points of difference.

At that time careful study by the Union committee and continued conference and negotiations over a period of several weeks permitted the resolving of all points of difference between the Company and the Union with respect to the job evaluation program. As a result, in September of 1943, the Company published its "Job Evaluation Plan and Standard Factory Job Descriptions" as approved by union and management. The Union joined the Company in a joint application to the War Labor Board which resulted in the installation of the rate structure single rates on April 24, 1944.

In the process of obtaining War Labor Board approval of the job evaluation plan, it was necessary that the War Manpower Commission make a detailed study of the proposed job evaluation plan, involving actual, on-the-spot checks of the jobs selected at random from the proposed structure. Accordingly, the War Manpower Commission, Los Angeles office, Manpower Utilization Section, sent two job evaluation experts to the plant where they worked for a period of several days making spot checks of the accuracy of the job description and evaluations. As a result of these checks, the War Manpower Commission approved and recommended the plan for installation without modification.

Before the War Labor Board finally approved the rate structure proposal, its analyst, Harold Nehr, made a careful study of the plan along with the War Manpower Commission recommendations. Thus it was that on the date of its actual installation, it had passed the test of study and criticism by the Union Job Evaluation Committee, War Manpower Commission job evaluation experts, and War Labor Board case analysts, and had the wholehearted support of all parties concerned.

In March of 1944, the Metal Trades Manufacturers Association of Southern California, faced with the problem of standardizing job descriptions and rates of pay in the metal trades industry, adopted the job evaluation plan and method of development, and distributed to their membership a complete description of the plan plus job descriptions of all of the major occupations found in the machine shops of the association. This was done for the ex-

press purpose of developing for the members of the Association the following three advantages:

1. A *common language* to be used in discussing wage problems within the plant, within the community and with government agencies.
2. A *sound procedure* for assuring proper wage relationship between jobs, both within the plant and within the community.
3. A *standard of measurement* for controlling rates within the area both during the war era and in the postwar era.

Although the plan as proposed by the company and the union to the War Labor

Board involved merit rating and rate ranges, it was not approved by the War Labor Board in that manner. Instead, the War Labor Board approved the middle rate of each rate range as a single job rate, and thereby eliminated from the plan the merit rating feature.

As a result, the installation was made as a single rate installation rather than a rate range installation. It is the company's intention to install the plan as originally proposed now that the War Labor Board controls on such an installation no longer exist.

The company is well satisfied with the relative order that the installation has made out of a previously chaotic rate structure condition. Prior to the installation, the company's rate structure plan consisted merely of a set of job titles and job rates which were interpreted in various ways due to lack of definition.

\* Detailed descriptions of job factors essential to rating, such as those below, were gone over by a union-appointed committee before deciding on adoption of the final program.

RATING - SUPPORTING DATA

Factors	JOB NAME	Engine Lathe Oper., Heavy - 3	JOB No. AB 20 0663E	Job Guides	Pt. Val.
SKILL	Training and Experience	Experience required to set up and operate assigned engine lathe to rough turn large heavy forgings for shafts, swivel sleeves and the like, to select proper speed and feed over limited range, and to grind simple cutting tools for turning various grades of steel and cast iron.			55
	Mental Abilities	Must read simple blue prints.			25
	Complexity	Jobs are long and routine requiring new set ups about once a day. Judgment exercised to select speed and feed where little variation is needed. Judgment used in chucking large, rough forgings by chalk method.			20
	Manual Dexterity	Operate multiple control engine lathe doing rough work to a tolerance of + or - 1/64" usually.			55
RESPONSIBILITY	Maintain or Protect	By careless set up, or misreading dimensions can scrap shaft valued at over \$1000.00. Not likely.			34
	Equipment	By careless loading of work to lathe, the work can fall and cause over \$1000.00 damage to lathe. Not likely.			28
	Safety of Others	By careless loading of forging to lathe, can cause serious lost time accident to others. Not likely.			20
	Leadership	None.			0
EFFORT	Physical	Occasionally exerts heavy effort in positioning large shafts tightening chuck and the like. 20% of time spent checking over machine, exerting moderate effort. Rest of time exerts very light effort.			55
	Mental	25% of time spent planning, checking dimensions, studying blue print and the like. Rest of time spent in observation of cut being taken.			25
JOB CONDITIONS	Hazard	By careless handling of forging while loading, may receive lost time accident. Ordinary care will prevent.			25
	Surroundings	Ordinary machine shop surroundings prevail.			10
	Com. Exp.	Must supply tools costing \$25.00 and lasting 10 years, or \$2.50 per year.			1
Described by: Gook - Hansen				Assigned to Group No.	352
Rated by:				At _____ Plant	Total



## SUGGESTED WORKING RULES AND REGULATIONS

1. Smoking permitted in designated areas during rest periods only. (Insurance company instructions.)
2. Repeated abuse of rest period privileges may result in deduction from regular working time.
3. In the interest of health, employees will assist in keeping rest rooms clean and sanitary.
4. Wandering from one department to another during rest periods will not be permitted.
5. Time cards are to be punched personally by each employee. Any error should be reported immediately to the foreman.
6. Employees must be in the department in which they work after the warning whistles. (First 2 whistles.)
7. Working time begins when the second whistle blows, and all employees are expected to be at their posts ready for work.
8. Persistent failure to report on time for work will be cause for suspension or dismissal.
9. In the event of illness, employees should make every effort to notify the management of inability to report for work.
10. Employees returning to work after an absence must report to the foreman before beginning work.
11. In the interest of safety and good workmanship, no beer or intoxicants can be allowed about the premises, and no employee can be permitted to work under the influence of liquor.
12. Changing of clothes and washing up is permissible only before and after working hours.
13. Unless authorized by the foreman, no employee is permitted to leave the plant during working hours.
14. Unless authorized, visitors cannot be permitted in the plant during working hours.
15. Employees shall use all safety guards furnished for each machine operation.
16. Five minutes will be allowed before quitting time to enable each employee to clean his bench and floor.

Any employee failing to observe the above-named working rules and regulations shall be subject to immediate suspension or dismissal.

# Making Company Rules Work

WITH company rules being incorporated more and more in present day collective bargaining agreements, or at least being put on a par with the provisions of the agreement, it becomes increasingly apparent that now is the time for management to take stock of plant rules and regulations presently in force with an eye toward revision or rewriting where necessary.

Practically every union agreement has a provision which recognizes the validity of posted shop rules. This may be as simple as a mere statement of the fact, or it may be as formal as the following clause, entered into the contract between Beech Aircraft Corporation and International Association of Machinists, A. F. of L.:

"It is mutually agreed that the regulations as set forth in the Corporation's Rule Book with such additions or alterations thereto as are made by the company from time to time, not to conflict with the provisions of this agreement, are necessary for the efficient operation of this plant, and that any infraction of these rules may constitute just cause for disciplinary action and that wilful violation of any rules may constitute just cause for discharge."

This clause clearly sets forth a basis for the preparation of rules, and insures the acceptance of any rules thereafter formulated. But what about the rules themselves? What yardstick is furnished to assist the plant manager in assembling or re-assembling shop rules into a working, vital set of regulations?

Recently there have been several articles written concerning the enforcement of shop rules, but there is a dearth of material regarding the preparation of the basic rules themselves. This article has been written, therefore, to serve as a guide to those entrusted with the creation or refurbishing of a set of plant rules or working regulations.

Every plant has its rules in some form or

By MICHAEL J. DOLAN  
Labor Consultant  
Dan Hay & Associates, Portland, Oregon

other, whether written or unwritten. They may consist of safety rules, sanitary regulations, or of certain working conditions that must be followed. No matter what their form, shop rules have from time immemorial been a source of grievance, a bone of contention, or, what is far worse, been totally disregarded.

Let us consider, then, three basic concepts which, if carefully followed, will assist in re-establishing working regulations and shop rules to their rightful place: (1) Rules must be POSITIVE; (2) Rules must be BASIC; (3) Rules must be ENFORCEABLE.

### Accentuating the Positive

In preparing shop rules it might be well to bear in mind the words of the currently popular song: "Accentuate the positive, eliminate the negative." It is unfortunately true that far too many shop rules begin with a resounding "NO," with the accent definitely on the negative. These "must not's" are enough to give the average employee a real inferiority complex.

Some rules, by their very wording, challenge the worker to disobey. It should be borne in mind that with human nature as it is, a poorly worded rule or regulation may create a defiant attitude in the employee, or a deep antagonism, which will eventually break down the entire structure of otherwise carefully worded regulations.

Consider the usual smoking rule as listed in many plants and shops:

"NO SMOKING ALLOWED DURING WORKING HOURS"

Such regulation is not only negative, but it is unenforceable. It is a direct challenge

to the heavy smoker to find some way of circumventing the rule. The average smoker considers his right to smoke as one of the unwritten rights guaranteed in the American way of living.

From the management side, it was not intended to forbid ANY smoking throughout the day when the plant rule was first established. As a matter of common practice, workers usually smoke during rest periods, either in rest rooms or outside the plant, where the danger of fire is not so great as within the plant proper. How much better, then, a rule such as this:

"SMOKING PERMITTED IN DESIGNATED AREAS DURING REST PERIODS ONLY (Insurance Company instructions)"

This rule removes the blunt, unequivocal wording of the "NO SMOKING ALLOWED," while replacing it with a common sense rule which still prohibits smoking in places where the hazard of fire is extreme, yet permits smoking in approved places where the threat of fire can more positively be controlled. In addition, the worker is made aware that the reason behind the restricted smoking areas is due to insurance company regulations. Thus a source of potential antagonism or evasion of a company rule is eliminated.

A general fault with plant rules, is that management attempts to have a rule for every situation that can conceivably come up. The all-inclusive list of several pages in length, printed in extremely fine type in many cases, invites the employee to disregard or omit reading such an imposing document. The ideal would be a list of certain basic rules and working regulations suitable for covering the situation at the present time. When changes and additions become necessary it is the height of simplicity to make the needed rules.



A second violation of the admonitions to "keep rules basic" usually consists of wordy, verbose rules, often with three or four separate ideas in the one paragraph. It would be far better to make separate rules, even though they consist of only a few words. From our own experience we know that we are more prone to read the short, crisply worded sentence which presents the germ of the idea in a few simple words, than the lengthy, rambling paragraph.

The accompanying WORKING RULES AND REGULATIONS are the result of intensive research in an attempt to determine basic rules which are sound, logical and easily enforceable. In arriving at these rules, no attempt was made to create an all-inclusive set of standards. It is recognized that certain of these rules will not of necessity be applicable in every situation. However, by deletion of non-applicable rules, or by rewording or addition of others, they may easily be made acceptable.

What has been attempted is the formation of basic rules which will serve as a solid foundation upon which to build the particular set of regulations applicable to each individual shop or factory.

#### Enforceable Rules

What does it profit a plant if it has a beautifully printed and carefully phrased set of rules—and can't enforce them? Not a bit of good, and quite a bit of damage. "A rule for a rule's sake" is not only bad, but positively dangerous advice.

Better by far that you omit a rule that is not currently needed, rather than put it in writing. Remember that it is comparatively easy to make additions to the plant rules, but it takes more than ink eradicator to delete rules, once they have been published.

If, for example, you have one shop rule which is patently unenforceable, the whole shop rule structure is weakened. Once employees discover that any shop rule can be violated with impunity, the entire set of rules becomes suspect. This article does not have as its primary purpose the pointing out of ways and means of enforcing shop rules. Rather it points out the necessity of common sense reasoning in creating shop rules that, at least on the face, are enforceable.

While insisting on observance of all shop rules, employers must see to it that they do not place themselves in the embarrassing position of writing a rule which imposes summary dismissal as the penalty for violation of any shop rule. It may be necessary to discipline the best workers from time to time for breach of a shop rule, yet there is certainly no desire to dismiss them and thereby penalize the employer. The following shop rule is a standard one, yet one which causes a good deal of embarrassment to the management:

"Infractions of any of the above rules shall be deemed sufficient cause for immediate dismissal."

Compare that with the following:

"Any employee failing to observe the above named working rules and regulations shall be subject to immediate suspension or dismissal."

The key word in the rewritten rule, is "suspension." Note that while dismissal may be enforced, there is still the alternative of invoking suspension from work where such a course is indicated. The suspension period can be interpreted freely by the management, depending on the gravity of the offense. At the same time, discipline within the plant can be administered without requiring immediate and mandatory dismissal for each rule violation.

Thus the mechanism for maintaining discipline within the shop is established

on a firm footing, without forcing the employer to penalize himself by firing good workers, or, on the other hand, overlook rule violations and thus, in effect, negate the shop rules.

We have seen that the time is ripe for either revising or rewriting outmoded shop rules. A simple yardstick of basic concepts to assist in refurbishing shop rules has been furnished, as well as certain basic rules which are applicable to almost every plant. The success or failure of your plant rules, the decision as to whether or not your working rules and regulations are to be dynamic and enforceable rather than static and unenforceable, rests on how closely the principles set forth in this article are followed.

## Crankshafts Snafu—Connecting Rods Out?

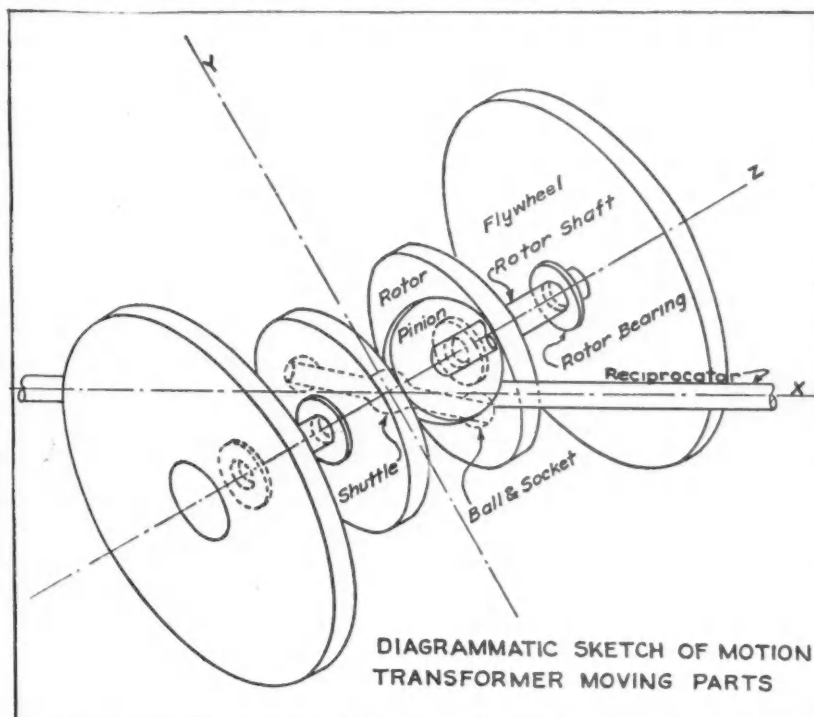
**E**LIMINATION of crankshafts, wrist pins, connecting rods and various other moving parts in reciprocating machinery is now possible, thanks to the invention of a new motion transformer by James A. Hardman of Logan, Utah. Patents have been assigned to the Utah Scientific Research Foundation.

The invention, subject of a 158-page report by the Civilian Production Administration, has been given extensive tests on 50-horsepower models by the United States Bureau of Standards. According to the reports, each unit tested operated satisfactorily with a very smooth performance and

negligible vibration.

Because of its elimination of so many moving parts it is believed that the invention will make possible the reduction of weight per horsepower in many types of engines by as much as one-third.

Compactness of the device is such that the entire mechanism may be enclosed in a small splash-oil case with the only external connections consisting of a short shaft extension which receives and delivers the rotating motion. Opposite this shaft extension is a reciprocating rod on the same axis for transmitting the motion to the ultimate receiver.



# Export Sales Now Will Assure Continued Production Later

**B**Y allocating part of current production to foreign markets, even though the domestic market can absorb present output, some Western manufacturers expect an increasing foreign business to take up the slack that will eventually come as domestic needs are filled.

Typical of some of these firms in its approach to the problem of gaining foreign markets is Ellinwood Industries, Los Angeles, manufacturers of farm, marine, home and office equipment.

## Percentage to Export

Ellinwood Industries plan to export 15 per cent of their production during the coming twelve months even though there is no need of foreign sales to take up all of the present output.

This is the very definite statement of Ray Ellinwood, president of the firm, and comes in the face of a domestic backlog of orders totaling \$1,000,000 for its Cat line of garden tractors alone.

However, Ellinwood points out, speaking particularly of agricultural implement production, even under the conditions of a seller's market, there is one distinct advantage to the producer in entering foreign fields now, especially those south of the equator. And to a certain extent this applies also to the customer.

"This advantage," Ellinwood said, "is the almost complete elimination of cyclical variations in delivery requirements which are characteristic of any agricultural product."

## Year Round Production

"By building substantial volume south of the equator, almost uniform production output can be absorbed through the entire 12 months of the year as compared to seven or eight months, the maximum period for which production requirements could be obtained in the United States and Canada."

The larger volume, which comes with year-around production, results in reduced cost and larger profit margins which permit more rapid and complete exploitation of existing products, and products in related fields.

## Latin American Market

Speaking of his tractor line exclusively, he said:

"By placing these products at strategic locations in Latin America, it will be possible to build up acceptance of those items which are relatively new to most countries in sufficient time to provide reasonably large volume requirements during the months of August, September and Octo-

ber of this year, peak sales periods south of the equator."

By late fall, he believes production capacities will be sufficiently improved to permit allocation of 25 per cent of total production to these countries, especially in view of the seasonal decline in U.S. requirements.

During February and March tractor production in the Ellinwood plant increased 400 per cent, very near the 1,000-per-month goal set for March. Production of 1500 is anticipated for May when the full assembly line will have been completed.

## British Competition

An additional reason for entry at the present time into export markets, the Los Angeles manufacturer states, is the impending competitive situation existing because of English concerns building larger but analogous products. In the immediate future, he believes there will be stiff competition in the lower price ranges from these products.

While export interest has primarily been because of the advantage of diversification of markets and elimination of seasonal fluctuations, there has been the additional consideration of the expected reduction in export sales cost for other products of the firm—such as the radiotone, stenocorder, and adding machine, which will require substantial export allocations in order to reach sufficient volume to secure effective low-priced production for the United States and Canada.

Production of the firm's commodities other than agricultural machinery is slated to get under way fairly rapidly, and of these, too, a substantial percentage is destined for the export market. In fact, Albert Rebel, manager of the firm's international division, is now traveling through South America on an extensive market survey.

Ellinwood does not anticipate any great variance between products for domestic or foreign use. Of the tractors, he says:

"Initial emphasis will be on tractors of maximum simplicity and dependability without relatively minor necessary refinements which Americans insist upon. Basically all units would be the same, with very minor variations and simplification."

The far South American market will probably utilize the trade name "La Mula Mecanica," the mechanical mule, because of the former ambition of our southern neighbors to own a mule, and because the Cat tractors are designed to do the work of a mule better than a mule.

• "La Mula Mecanica" is the name under which the tractor shown below is already becoming known in the republics of Central and South America. By means of export sales, Ellinwood Industries, Los Angeles, expects to reduce cyclical variations in production.



# How To Brace "Stop In Transit" Carloads

ONE of the biggest problems facing many shippers today is the matter of bracing pool or "stop in transit cars," destined for two, three or four consignees.

To take advantage of this type of shipment the loadings must be loaded and braced so they are arranged for easy unloading by each receiver, and so the containers or packages will not be mixed, damaged, or lost in transit. After partial unloading by the first consignee, an improperly braced car is likely to give rise to delays, losses, misunderstandings and damage.

A method of avoiding these difficulties lies in the use of flat steel bands with wooden bulkheads for bracing. Proper use of steel strapping results in less damage, greater ease of application and considerable saving in time. Since each lading is segregated and strapped separately, there is no re-bracing to be done after partial unloading.

Steel band, in its adaptation to straight

or mixed loads . . . loadings for one consignee . . . and for pool or "stop in transit car" movement, has been established by carriers and industry as an economically sound and effective solution to the bracing problems encountered in modern freight transportation. As time has passed, variations in loading procedures have been devised to meet the requirements of each class of lading, with the emphasis on safe arrival through adequate in-transit protection.

Canners have long realized the advantages of the steel strapping method of carload bracing. Figure No. 1 shows the initial unit in one end of a car of canned goods. Note that the gate is constructed to confine the individual cartons, and serves as a medium to segregate this particular unit from others intended for different consignees. It is obvious that no mix-up will occur in the unloading when each customer's lading is strapped separately in this manner.

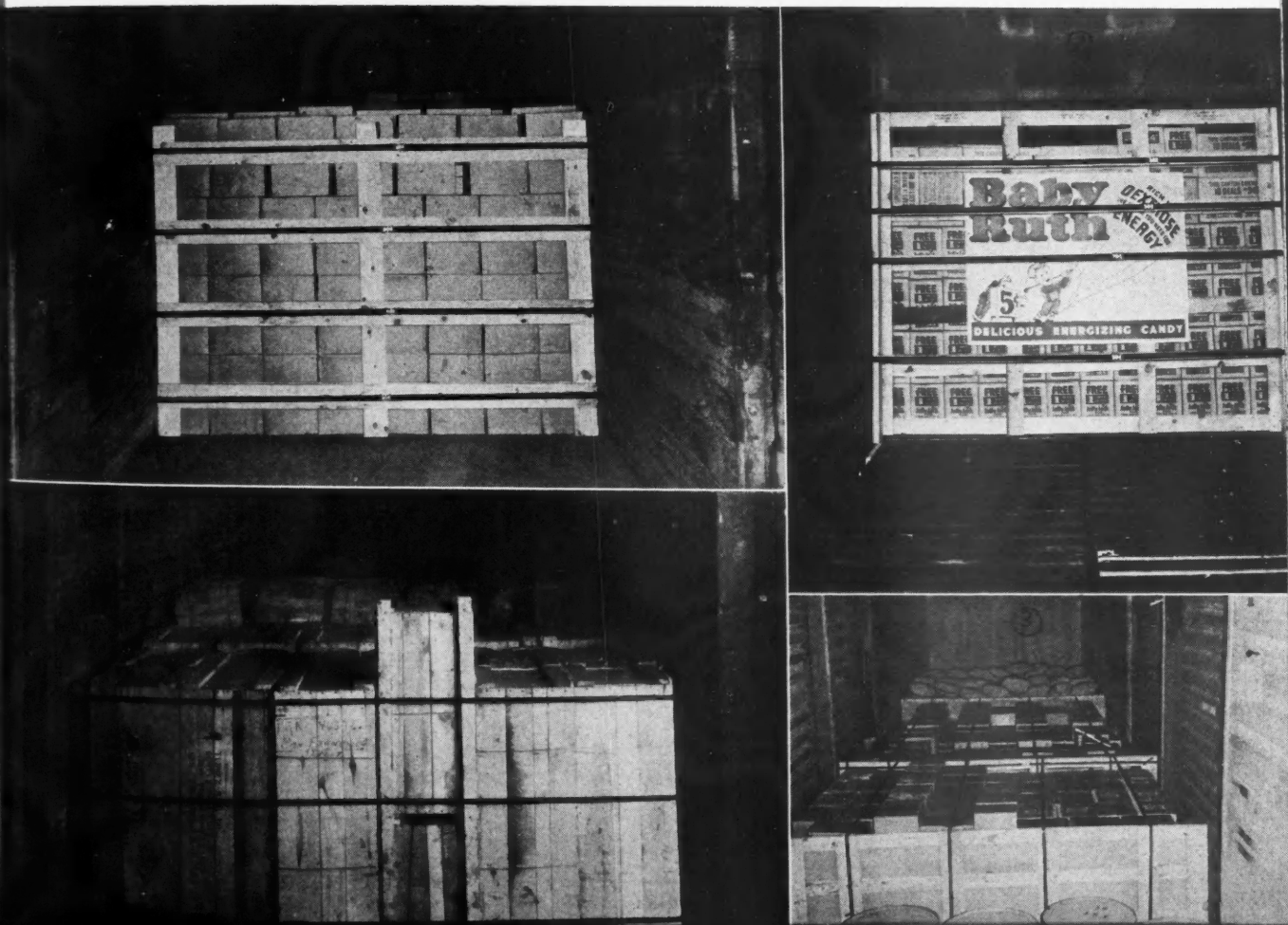
Many large manufacturers of candy utilize steel band to segregate and protect each customer's part of the shipment in their pool or "stop in transit cars." (See Fig. 2.) The ease of unloading is apparent . . . the consignee merely snips the steel bands and removes the retaining wood gate to get at his part of the load.

Figure No. 3 shows a "stop in transit car" with a variety of containers, bags of industrial sugar, fibre cases of starch, steel drums of syrup, all going to different customers.

The various loadings are segregated for each partial unloading, for example, the first consignee would find his part of the shipment loaded in the center of the car, near the doorway, the last stops occupying the ends of the car. When one unit is removed the other units are protected from damage or loss in transit, as they are banded separately, which eliminates possible removal from car by the wrong consignee.

Figure No. 4 shows a partial load, consisting of nuts and bolts, packed in wooden boxes, barrels and kegs. The necessity of special gates is eliminated for a shipment of this type. The boxes are placed at both ends of the load and in this way they act as a bulkhead.

• Four striking examples of how industry is currently using steel strapping for bracing loads in "stop in transit car" shipments.





# Zinc Spray Method Used To Fight Iron, Steel Corrosion

**A** NEW weapon in the battle of industry against corrosion has appeared in the development of a method of spray coating zinc and other metals on steel and iron bases.

Uses of the technique already have a wide application in the field of tank spraying, and present indications point conclusively to a successful invasion of the bridge maintenance field by the new process.

Zinc spray coating, however, will not necessarily be limited to maintenance of tanks and bridges. Because of the high degree of mobility which the process possesses its uses should have a wider application. Already experimental work is being carried on to determine how well the process will combat the corrosion of floor beams in refrigerator cars caused by the action of salt water used in the refrigerating system.

Though galvanizing is cheaper in some instances in the coating of metal with zinc, coating by means of the spray gun is so far probably the best means for a great many others. Obviously, it would be impossible to bring a section of a bridge to a galvanizing works for dipping.

How the process works is as follows: The end of the flame that comes from the

spray gun has a temperature of from 1800 to 2000 degrees at the point of impact on the metal. This comparatively high degree of heat softens the metal sufficiently to permit the close bonding of the zinc to the steel surface. The gas used is a regular industrial gas such as Shellane.

A few inches out from the end of the nozzle the flame has a temperature of only about 780 degrees. At this point in the flame a stream of powdered zinc is introduced from another section in the nozzle of the gun. When the zinc powder reaches the flame at that point it becomes molten, diffusing through the area of the flame in such a way as to give an even distribution over the area on which the flame falls.

## Method's Origin

Strangely enough, the method had its origin in the search for a way to spray colored glass on metal. While means of doing that was found—and the firm developing it took its name, Glaspray Process Company of San Francisco, from the process—later indications were that a modification of the glass spray technique would be of more immediate service to industry in the metal spraying field.

One early commercial application of the

zinc spraying process occurred during the war when the firm was asked if it could find a way of salvaging a warship's water tank that had been slated for the scrap pile.

The organization had never attempted such a task before, but after it had shot-blasted the surfaces of the tank so that they were completely free of all corrosion, it sprayed a coating of zinc on the raw metal.

Success of the application was such that the Navy ordered the process applied to others of its ships as they came into port for maintenance or repair.

Up to a month ago the Navy had used this means of lining tanks on no less than 64 of its vessels ranging in size from flat-tops down through the LST's and back up to floating drydocks. Translated into terms of square footage of metal covered with zinc by the company's process, the Navy work brought the total up to about 571,000, or very nearly 13 acres.

Yet zinc is not the only metal which can be applied. Others are: tin, cadmium, lead, aluminum, yellow brass, everdur bronze, copper, monel metal and nickel. For each of these the process works without oxidation taking place. Manganese, silicon and chromium can also be sprayed though not without oxidation.

But at the same time that the Glaspray Process Company has made its incursion into metals spraying it has also gone into the spraying of plastics. For tanks such as those of breweries, soft drink bottling plants and those found in certain of the fruit industries where the metal is subjected to the action of acids present in the contained liquids, plastics are sometimes the most inexpensive solution, and the spraying techniques evolved in zinc coating have been applied with success.

So far, of the several plastics tried in the process, thiokol and polyethylene offer the best results. Experiments, however, are continuing with indications that other and better thermo-plastic materials will be found.

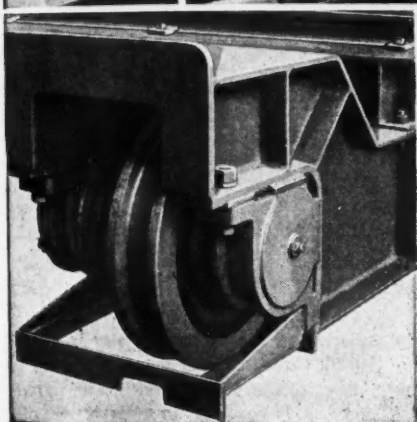
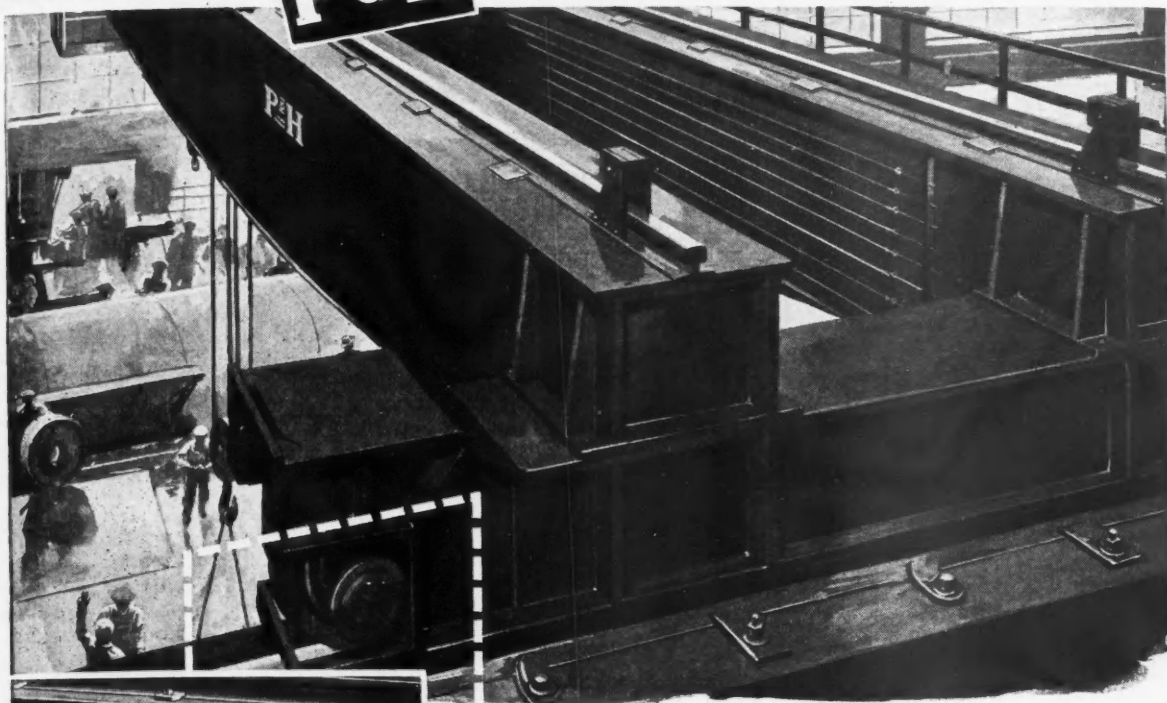
While the process in spraying glass has commercial possibilities, developments are not as far along as in the fields of plastics and metal. Spraying of colored glass on metal is comparatively slow work, and the difficulty of maintaining uniform color is still considerable. In applying glass to such materials as cement, plaster and those of an organic nature, problems have arisen through the base materials giving off gasses at temperatures below the fusing point of glass.

■ By means of the spray gun in the hand of the operator, zinc is blown onto the raw steel surface of a water tank. Because it bonds itself to the base metal at a temperature of from 1800 to 2000 degrees, it forms a powerful defense against the forces of corrosion.

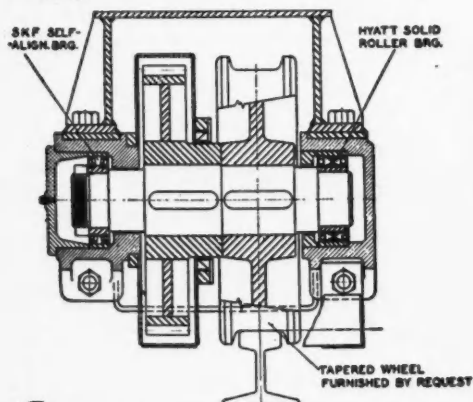




# Another **P&H** Added Crane Value!



**1** True MCB design permits easier wheel removal. Simply drive wedges under end truck to relieve wheel of its load. No jacking up is necessary.

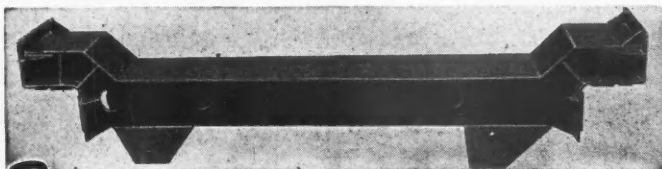


**2** Diagram shows how P&H end trucks provide roller bearings to take both radial and thrust loads, thus eliminating troublesome end thrust washers.

## Genuine **MCB** End Trucks Reduce, Simplify Maintenance

Here's the most highly approved type of crane end-truck construction—true Master Car Builders' design. With its full 90° notch, there are no diagonal split bearings to invite trouble or complicate servicing.

Here are three good reasons why P&H Cranes provide easier servicing which reduces down time and lowers maintenance costs. Insist upon these Added Values when you buy your next overhead crane. See P&H—America's leading Crane Builders.



**3** With double web box construction, P&H's all welded end trucks provide greater lateral stability. Heavy bearing seats, rigidly reinforced, take all impacts from starting and stopping.

### **P&H**

## **HARNISCHFEGER**

**CORPORATION**

ELECTRIC CRANES • EXCAVATORS • ARC WELDERS  HOISTS • WELDING ELECTRODES • MOTORS

**ELECTRIC OVERHEAD CRANES**

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Milwaukee 14, Wisconsin

# Is There Scandal In The Surplus?

*In the Poet's Words—"Things Aren't Always As They Seem; Skimmed Milk Poses as Rich Cream"*

WASHINGTON, D.C. — Human institutions never are absolutely perfect, because they are subject to the same flaws and imperfections that run through all the myriads of things that make up the material universe.

Qualified by this reservation, it is reasonable to assert that the War Assets Administration, in the national headquarters, in the Capital, is a sound and decent organization. Its personnel are usually fine people who would not deliberately tolerate dishonesty.



The trouble with the Government agencies which dispose of war surplus does not originate in the administrative sector in the Capital but with the Congress which made an utterly impossible and nonsensical law, and which has continued to pile one foolish piece of legislation upon another.

Until recently, at least, the Washington headquarters could do little except to try to make the policy devised by the Congress workable. They think the new system, which came into existence on March 25, under General Gregory, may be able to exercise a more direct and stricter control over the numerous parts of the organization now broken down into 33 regional subdivisions.

## Minor Improvement Seen

It remains to be seen if the earnestly sincere purposes of the national command can be made effective. This reporter thinks, on the whole, there will be only minor improvement. The difficulty will not be with the Washington headquarters, it will probably stem from the political aspect of the whole business. So long as politics have a dominating influence in the appointment of the men who are in charge elsewhere, and who do the actual selling, there is not apt to be much change in the conditions which have caused so much exasperation and complaint throughout the country.

By and large, the men in Washington are experts in their various fields of industry, technique, and commerce. They know the stuff they have to sell because they come from the industries where it was made, and they are trained and professional sales executives.

By ARNOLD KRUCKMAN

The condition which causes so much scandal in various places, particularly in Southern California, is the employment of people who usually have no knowledge of any of the practices of business, nor of the industries whose products are involved. They may be good people, often they are undoubtedly perfectly decent citizens, but experiences which make them paramourly good politicians do not qualify them for the job of selling the most stupendous assembly of commodities, merchandise, equipment, and property of almost every known description ever assembled anywhere in the history of the world.

## Los Angeles Situation

This situation in Southern California is mentioned in this letter because it is the instance that is most important to the people of the West Slope. Instances which sound strange to the business community have aroused comment in New York, Chicago, Omaha, and elsewhere. But the extraordinary incidents that are reported from Los Angeles have serious import to people who want some of the surplus which is supposed to be available in the West.

This reporter has been told about a manufacturer in Southern California who makes highly essential equipment for the Army and the Navy. The equipment is still required. The manufacturer also makes articles sold in the commerce of peace.

It is understood this manufacturer has never been interested in any of the political activities in the area. He devotes himself strictly to the business of production and commerce. He needed a machine tool press and the type he required was not available except in the stock of war surplus, so five or six months ago he started to negotiate for one.

He located the kind of press he wanted and was prepared to pay the \$15,000 or \$25,000 in cash fixed as a ceiling by OPA. But for one reason or another this press, and other presses he subsequently located, were not to be had. Apparently there always was some vague and smooth reason why the press was preempted by some high priority.

Apparently some of these presses, few and rare as they are, come into the posses-

One of the best-informed writers at the Nation's Capital, Arnold Kruckman, presents each month authoritative comments on political developments and their practical application to industry of the West. Any reader who wishes additional information may write to him directly, using business letterhead, at 1120 Vermont Avenue, N.W., Washington, D.C. Inquiries will be answered free of charge. You also are invited to contact him personally in Washington. Copies of pending congressional bills may also be obtained free of charge.

sion of people who find they do not need them. It is said that this manufacturer was notified at least three or four separate times by representatives of sales organizations that they could supply him with exactly the press he sought, and that they could deliver it immediately, if he were willing to pay for the service a commission of 15 per cent over the surplus ceiling price.

The manufacturer, with a rigid sense of ethics, and with a very fine war record, felt uncomfortable about such a deal. He declined. With the aid of a friendly national official of War Assets Administration he located another press. But despite the earnest efforts of the Washington official it was found that one priority after another bobbed up to block the acquisition of the press.

## Pressure Needed

Finally the manufacturer actually reached the point where the lack of the press made it necessary for him to contemplate the probability that he might be compelled to abandon a large part of his productive activities. Under the pressure of these circumstances he desperately turned to the Army, and to his Congressional representatives, with the support of his local newspaper publisher. He got the press. He secured not only one press, but according to the latest reports he will get three presses.

It would be easy to say that this experience sprang from the entanglements of red tape. It might be true, but it would not be true in this instance. If this reporter candidly wrote here his personal conviction, the statement might be twisted into libel.

In fact, it is unwise for news writers and commentators, who do not wish to become entangled in investigations and unpleasant personal experiences, to discuss any aspect of some of these incidents. For this reason the taxpayer seldom is informed about these incidents. It is uncom-

(Continued on page 58)

# AUSTIN-DESIGNED BUILDINGS PROVIDE MODERN DOCKS *for MOTOR TRANSPORT!*



Transportation flows smoothly from waterway to highway in the modern Hills Bros. Coffee plant, erected by the Austin Company at Edgewater, New Jersey.

Well-lighted and ventilated, the enclosed dock is at Trailer platform height to facilitate loading. Products are carried right into the vehicle by mechanical conveyor.

**The Austin Company, Engineers & Builders, realizes the importance of designing motor transport right into a building in accordance with production and distribution requirements.**

This well-known firm also recognizes the value of advance consultation with Traffic and Production Managers in linking Trucks and Trailers directly to production lines.

Note how the Austin-built Hills Bros. Coffee plant shown here blends motor transport facilities right into this modern building to provide a smooth flow of shipments.

This kind of planning conserves human energy, time and money. Goods and equipment are sheltered

from the weather . . . Trailers are loaded from mechanical conveyors . . . internal traffic is at a minimum . . . loading docks are tailor-made to fit into the complete operation!

The success of your new plant depends to a large extent on how closely internal handling is keyed to external traffic. Your Traffic Manager knows the value of planning transportation flow both in and out of the plant. Let him discuss the entire problem with the men who design your plant—and with an experienced motor transport operator—before you go beyond the blueprint stage.

World's Largest Builders of Truck-Trailers

## FRUEHAUF TRAILER COMPANY

Western Manufacturing Plant, Los Angeles

Sales and Service Branches—

Los Angeles • San Diego • San Francisco  
Salt Lake City • Fresno • Phoenix • Seattle  
Billings • Portland • Spokane • Denver • El Paso

*"Engineered Transportation"*

REG. U.S. PAT. OFF.

# FRUEHAUF TRAILERS





fortable to "stick your neck out" when there is a powerful political machine in the offing.

It is possible some of these curious enterprises will come to light if the investigation demanded by the Purchasing Agent of the City of Los Angeles is launched by Congress. Apparently irked by the situation, he has asked every purchasing agent of every major town and every county in Southern California to join in a demand for an investigation of the whole surplus mess in Southern California.

#### Refrigerator Case

In common with others, the Los Angeles official has found that materials presumably available are held back, for reasons not easy to understand, or because they are slow in release by the Army and the Navy. He also has heard the yarn about the 339 refrigerators which were placed on sale, and were found by the eager buyers to lack components which would make them work. It is said to have then been discovered the components were placed on sale earlier, and were acquired by those few who, presumably, moved in and bought the refrigerators no one else could use. It is natural to assume that articles purchased under such conditions would bring only nominal prices.

There also is the story about the soldering iron which had to wait three months to be sold while the printer got out the

catalog, and while the surplus customers clamored for the soldering irons. It is reported 8,000 persons attended this sale, were admitted ten at a time, and scarcely took the trouble to accept the catalog, published with such faithful care by the devoted advertising specialists of WAA, and the artistic printers.

Down in San Diego there is the classic example of the veteran who bought 20 pieces of highway equipment, heavy machinery, but who never had had any business with highways except to ride over them. The law says preference sales shall be restricted to those who need what they buy in their business operations. Another individual in San Diego, with a veteran's preference, is reported to have bought a number of machine tool presses, which later appeared in widely separated ownerships.

#### Torrance's Spot Sale

But the prize story is the history of the spot sale which was held at Torrance, in WAA Warehouse No. 1, at 190th Street and Normandy Avenue, late in March. It stirred even the personnel of WAA in Southern California to make bewildered comments. The sale lasted five days. The theory of the spot sale is that everything is sold to anybody who may want it.

Thousands flocked to the sale, over a third of them veterans. The sales started at 10 a.m. The veterans tell the story, and they say that they learned (later) long

before the sale opened, some of the WAA salesmen went around the huge warehouse and placed SOLD tags on all the choicest pieces of machinery. Obviously, no one could expect to buy anything that had already been sold.

When the crowd was permitted to enter, they espied the SOLD tags, and they made comments that were not complimentary to WAA. One veteran needed a large lathe. He had an urgent need for the lathe. He also had a serious doubt about the sale. He cornered a salesman and demanded to be told to whom the lathe had been sold. The salesman could not tell. He did not know; and, anyway, it was a deep Government secret.

#### Vet Gets Lathe

The veteran was not easily fooled. He took the various serial numbers, the declaring agency number, and other identifying data. Then he went to headquarters, and insisted on a complete check of the incident. It soon became clear the lathe *had not been sold*. The veteran made such a noise that the lathe was sold to him. A protesting veteran can be an awful nuisance.

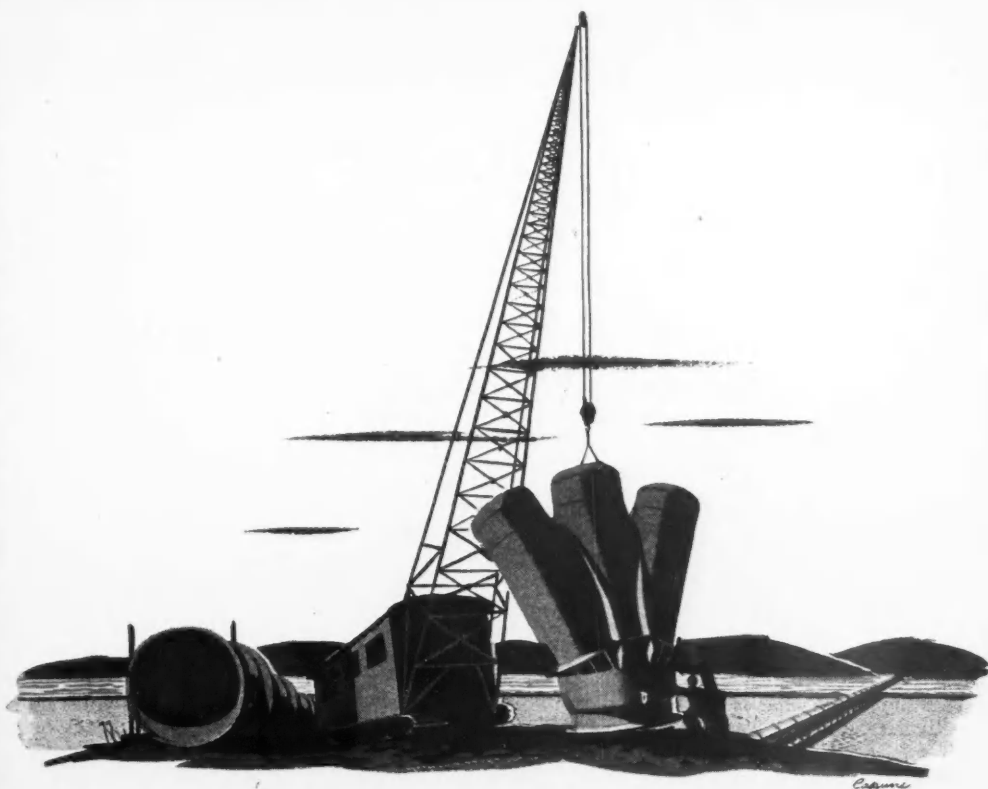
All these unhappy happenings were bound to start something. WAA has a Compliance Division, headed by a former FBI man. It is the work of this Division to investigate, and to instigate actions that will obtain obedience to the law, and punishment of those who have flagrantly vio-

**HANDLE WITHOUT CARE**

Pioneer Rubber Mills Fire Hose is not made to be handled gently. The jacket of woven cotton cords takes the beating of grueling fire-fighting under all conditions, industrial or municipal. The rubber lining resists bending, flexing, and oxidation, remaining live and resilient for a long life of service. Pioneer Fire Hose, as well as Pioneer Industrial Rubber Products, asks no favors on any job.

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 Branches in LOS ANGELES · PORTLAND · TACOMA · SEATTLE  
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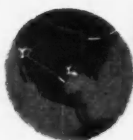




## PIPELINES OF STEEL

With its purchase of Western Pipe & Steel Company, Consolidated Steel Corporation is better equipped than ever to fill your needs for steel pipe as well as other forms of fabrication and erection.

If your current or future plans call for precision craftsmanship in steel, Consolidated's versatile engineering experience and expanded facilities stand ready to carry out your orders *immediately*.



## Consolidated Steel

FABRICATORS • ENGINEERS • CRAFTSMEN

CONSOLIDATED STEEL CORP., LTD., LOS ANGELES, SAN FRANCISCO,  
BAKERSFIELD AND FRESNO, CALIF. • PHOENIX, ARIZ. • ORANGE, TEX.

LEADERS IN THE WEST AND SOUTH



REFRIGERATOR CARS



STEEL BUILDINGS



SPECIAL STRUCTURES  
*Palomar Telescope Dome*



DAM TRETTLES



PRESSURE VESSELS



DRUM GATES

lated the law. Its agents have been in Southern California for weeks. The presumption is that they work quietly, and they work in such manner as not to jeopardize the jobs or the interests of those who may supply them with information.

The shift of officials in the Southern California area has been so frequent that it has not been easy for the personnel to determine who might be the reigning power. For a time Hector Haight, of RFC, held the reins. There are some who say he still holds the reins.

Not long ago a pleasant person from the political purlieus of the Mormon group in Utah was made Regional Director in Southern California. People like Serge F. Ballif, Jr., even though he is not regarded as an authority in commerce or industry.

#### Ballif Aids FBI

Ballif is a man of original ideas. It is very apparent that he thinks an investigation along FBI lines should be conducted out in the open. On March 27 he issued from the Los Angeles Regional Office of the War Assets Administration, Regional Memo No. 5. It reads thus:

Subject: Requests for Investigation.  
To: Entire Staff.

We are fortunate in having investigators from the Washington staff assigned to this territory. They will look into reported violations of the regulations applying to the acquisition and disposal of surplus property.

The interested employee may be sure that prompt attention will be given the matter if he will set forth the essential facts in writing and

present them to his Division Chief. The Division Chief will review the case with the employee, obtaining important data if available, and will forward the request for investigation to Mr. Gerald G. Smith, Deputy Regional Director for Management.

Mr. Smith will review the request in terms of accepted investigation policy and forward the request to the Washington representatives assigned to this region. Mr. Smith will keep the Division Chief informed of progress on the case.

We urge you to utilize these investigation facilities since they are the only method we have of protecting the Government against unfair and discriminatory practices.

(Signed)

SERGE F. BALLIF, JR.,  
Regional Director.

Presumably hundreds of these memos have been distributed to the personnel in the Los Angeles Regional Division of WAA. Within a few days after they were circulated a number began to pour into the mail that comes to this reporter in Washington.

There is something touching about the naivete of this unique Government document. The employee is advised, with full brass band and extra orchestral effects, that the Washington investigators are on the job.

Obviously it has not entered any one's mind that an employee would immediately hasten to spread the word among those who might have surreptitiously benefited by surplus transactions to watch out for the gumshoe men from the Capital. Nor

would it occur to anyone to destroy the evidence, or to smooth over the place where the body is buried.

Moreover, after perusing this memo, it is almost absolutely certain that few employees of WAA would have the temerity to supply their information and their suspicions directly to "the investigators from Washington." The method of going through "channels," with the many curious eyes enroute, is exactly defined.

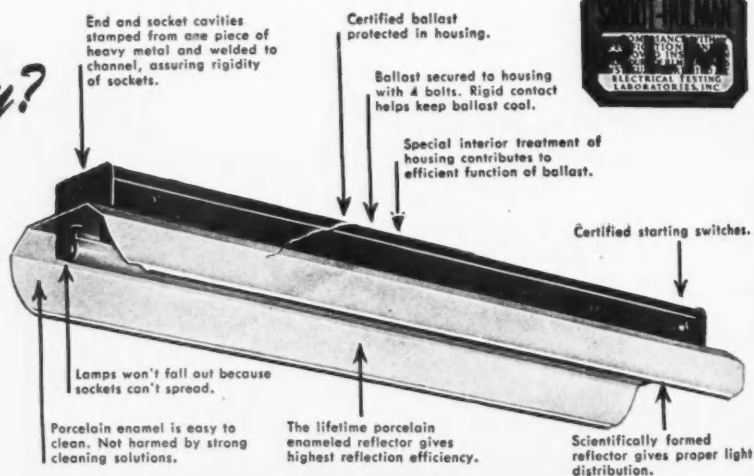
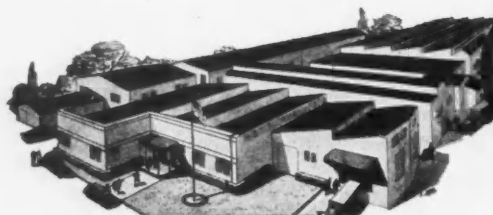
It will be interesting to learn how much information and data eventually reaches Mr. Smith, and how much of this information Mr. Smith will deem fit to forward to the "investigators from Washington." Often when the police raid the haunts of crime and the established centers of vice, there are quiet grapevine warnings which, in the argot of the underworld, are known as the tip-off. They do not use the billboards, or the megaphone.

#### Ballif May Be Shocked

It will doubtless be shocking to Mr. Ballif if his devotion to the formulae of Government red tape is misunderstood. The question naturally pops up in one's mind about the reaction of the smart boys who apparently have not been inactive in Southern California. And it will be especially interesting to learn what the officials in the national headquarters in Washington think about things. There is food for thought in the fact that, in order to

## Why Buy Certified Quality?

Because the many features which enable Smoot-Holman to certify highest quality provide equipment giving the most light with the least maintenance cost. The RLM label is an additional guarantee, because RLM quality is policed by independent testing laboratories. Because material shortages still exist, we can accept orders only for future delivery. We suggest that you anticipate the fall season by placing orders now to assure delivery at that time.



OFFICES IN PRINCIPAL WESTERN CITIES • BRANCH AND WAREHOUSE IN SAN FRANCISCO

speed disposal the most recent revision of national policy empowers the Regional Directors to sell \$1,000,000 worth of surplus without reference to national headquarters.

Apparently there are no conditions of a similar nature elsewhere on the West Slope. The chief complaint in the Seattle region is about the treacle slowness of the method of disposal. The veterans in that area have worked out a plan by which they use their priorities to procure surplus commodities cooperatively, thus obtaining by bulk purchase the things most of them could not buy from Government individually. They have established a center where they sell the merchandise retail to veterans only.

#### In the Northwest

In Portland, Oregon, the chief trouble is with the tens of thousands of emergency houses which occupy sites the community needs badly for plants which wish to move into the Portland area. The houses are idle and unoccupied, and contain lumber which is urgently needed in the national housing program.

The Government is under contract to remove the houses, to vacate the space; but the usual red tape is so tightly wound around the proceedings that, with the best intentions in the world, the community has not yet been able to have them torn down, and the material shipped away. However, it is anticipated eventually the Government processing will be completed, and the space will be available.

The report in Washington is that there is little actual complaint about specific irritations in the San Francisco area.

In San Diego there is much complaint because the building materials, mainly lumber, needed to erect new housing, is shipped elsewhere by the surplus people because Government requires they sell for the highest price they can get. It happens, for instance, in lumber, the price per square foot in San Diego is lower than it is in another place.

#### Lucky Tuna Fishers

The owners of the tuna boats apparently have few complaints. When the Government took their craft they were paid \$400,000 per craft. Similar craft today are worth \$600,000. When the tuna fishers repurchase the boats, the base price is \$200,000. In addition, they are allowed the sum of \$100,000 to recondition the boats; moreover, for other allowances they are permitted to deduct approximately \$30,000. Thus, they buy back the craft they sold for \$400,000, for the sum of \$70,000, net.

But though the tuna fishermen have little to complain about, they have managed to find something unsatisfactory in the question of rights to the great tuna fishing areas of the South Pacific. Hence they are now agitating for bases on the islands of the French and British.



MODEL AB-3  
5 HP  
2600 RPM

# first

## IN GLADDEN'S NEW LINE OF ENGINES

**POWER IN A SMALL PACKAGE** — Rated at 5-HP at 2600 rpm., Gladden's Model AB-3 Busy Bee engine has a range of from 3 to 6 hp., hence offers exceptional flexibility in a variety of applications.

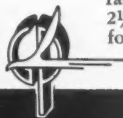
Designed to include features of aircraft engines, the Busy Bee is made of new light metal alloys, is the lightest engine in its horsepower class, fits easily into only 2.4 cubic feet of space.

**HIGH PERFORMANCE** — Under all load conditions, the Busy Bee performs. Its flat torque curve reflects ability to lug when sudden loads are thrown on at any engine speed.

The Busy Bee is only one of a line of new engines ranging in horsepower from 2½ to 15 that are scheduled for production.

**EQUIPMENT  
MANUFACTURERS  
AND DEALERS**

Use your letterhead  
to write for illus-  
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635 West Colorado Blvd., Glendale 4, California

**CANADIAN REPRESENTATIVE  
HARRYSONS, LTD.**

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# WESTERNERS AT WORK...

## Arizona

At Douglas, A. W. Engelder, gen. auditor, Phelps Dodge Corp., retires after 41 years service, and is succeeded by John Kuhn who is upped to asst. gen. auditor in the process. . . . T. L. Chapman, new mgr. of mine and mill operations at Tennessee Schuykill mine, Chloride, comes from post with Tucson district U.S. Bureau of Mines—he should know his mines. . . .

Charles F. Willis retires as act. mgr. of Mining Journal to devote full-time to post as sec. of Arizona Small Mine Operators Assn. and public relations work. . . .



● Not afraid of responsibility are W. E. Henderson (left), acting gen. mgr. for Hall-Scott Motor Car Co., Berkeley, and James D. Essary Jr., mgr. Boeing's new labor relations department, just back from the Navy.

Lawrence H. Lohr, head of Phoenix division of McKesson & Robbins appointed operations mgr. of firm's Los Angeles division, and James M. Brandt, formerly merchandising mgr., succeeds to the Phoenix post.

## California

Kenneth F. Keefe, production control supervisor for Friden Calculating Machine Company, San Leandro, resigns to take appt. as gen. mgr. of Little Giant, Inc., Emeryville, washing machine manufacturers, and Gerald D. Hecker Jr. resigns as production co-ordinator with Bethlehem Steel shipbuilding division, to become sales mgr. . . .

Tide Water Assoc. Oil Co. upped Herschel Y. Hyde to v.p. in charge of mfr. when Lloyd F. Bayer, v.p., requested full time for his job as chairman of operating committee; W. P. Hugo, manufacturing mgr. appt. asst. v.p.; T. O. Edwards Jr. upped to gen. mgr. of Avon refinery from post as gen. supt.; C. K. Viland appt. gen. supt. of research and devel. dept. succeeding Hyde; T. L. Wark appt. v.p. in charge of production; other apptmts.: William D. Goold as asst. supt. of prod. in San Joaquin Valley district; Frank H. Kratka Jr. as dist. prod. engineer at Ventura, succeeding Goold; Thomas E. Weaver, dist. prod. engineer in San Joaquin Valley, succeeding Kratka, and William E. Perkes, dist. petroleum engineer in L.A. Basin.

Following are changes in West Coast executive personnel of Bendix Aviation Corp.: Palmer Nicholls, v.p.-gen.mgr. of Pacific division becomes v.p. and group exec. in charge of Pacific division and West Coast Bendix; Mel M. Burns, formerly asst. gen. mgr. moves up to gen. mgr. of Pacific division; and R. C. Fuller, formerly sales mgr. has charge of new West Coast division as gen. sales mgr.

Rufus W. Putnam, wartime district engineer of the Los Angeles Engineer District, is head of Kaiser Engineers, Inc. L.A. office.

Director of ATA's new shippers research division is Homer S. Youngs, former chief of chem. lab. of Douglas Aircraft's Santa Monica plant. . . . John Sender is new pres. of Castalov Corp. of Calif., Los Angeles. . . . Friendly rivalry—Nathaniel Paschall, stepson of the founder of Boeing Aircraft Co., has been upped to v.p. in charge of domestic sales for Douglas Aircraft Co. . . .



● Looking forward to the better things of life in Montana's wide open spaces is Maj. Gen. Ralph Royce, retiring air hero (right) who teams up with Ed Klies in Great Northern Airlines, headquarters at Great Falls.

When California Container Corp. became part of Container Corp. of America, Chicago, W. M. Dixon, v.p. of Chicago concern, was named supt. of coast plants at Oakland, Seattle and Los Angeles. . . .

Dried Fruit Assn. of California elected C. W. Griffin, California Packing Corporation, San Francisco, as pres. for '46. . . . Charles W. Metcalf returns as resident mgr. of Oakland plant, Fisher Body division, General Motors. . . . C. T. Spivey upped to asst. director of industrial relations of Columbia Steel Company, San Francisco. . . .

Only new officer in Pacific Coast Aggregates line-up following annual meeting is R. G. Trevororrow, named asst. sec.-asst. treas. . . .

Frank E. Russell Jr. upped to supt. of motive power at Sacramento Shops of So. Pacific, succeeding the late A. B. Wilson. Russell just returned from armed forces where he was with Military Railway Service. . . . W. Art Mankey named asst.

to pres. of Ryan Aeronautical Co., San Diego. . . .

Changes in Northrop Aircraft Inc. executives at Hawthorne, include election of Richard W. Millar, Los Angeles, as vice chairman; John Wescott Myers, v.p. in charge of sales (formerly mgr. of airplane sales); and A. C. Morgan, asst. sec. (promoted from contract administrator). . . . Over at Earle M. Jorgensen Co., Los Angeles, R. K. Beall named as v.p. and director, plus old job as mgr. of sales in the L.A. office and Paul C. Childs, gen. mgr. of Oakland office becomes v.p. as well. . . .

C. E. Stryker, former v.p. and asst. to pres. at Nordberg Mfg. Co., Milwaukee, heads westward to assume post as pres. of Adel Precision Products Co., Burbank. . . .

American Assn. of Petroleum Geologists recently picked Westerner Earl B. Noble, Los Angeles, as its new pres. . . . William D. Mewhort, treas. of Menasco Mfg. Co., Burbank, is a new member of Controllers Institute of America. . . .

George Castera, new pres. of Bardco Mfg. & Sales Co., Los Angeles, succeeding the late Fred Jarvis; co. is currently constructing some 65 plants for UNRA. . . . Carl S. Bennett, L.A., elected regional v.p., western states, of F. W. Dodge Corp. . . .

L.A. C of C has a new industrial engineer—E. K. Young, formerly 10th regional WPB mgmt. consultant—replacing Augustus Slater who resigns to handle all research and investment advisory work for Gross, Vancourt & Co., L.A. . . .



● New NAM men for Northwest. George L. Rideout (Washington) (at right), formerly in public relations dept. Puget Sound Power & Light. H. F. Kempe (Oregon), served as captain in army intelligence in Pacific areas. Prewar with Bank of California, Portland, Ore.

Did you know that Theodore O. (Ted) Kluge succeeds the late C. D. Cavallaro as gen. mgr. of Cal. Prune & Apricot Growers Assn. . . . that Gibson M. Gray succeeds the late W. P. Paulsen as gen. mgr. of Workman Packing Co., S.F. . . . that Herman D. Nichols, v.p. of Tubbs Cordage Co., is in Manila, P.I., assisting in rehabilitation of Philippine cordage properties . . . that Thomas Wolfe, v.p. of Western Air Lines in chg. of traffic,



Los Angeles, has resigned and is succeeded by Richard Dick as acting v.p. in charge of traffic . . . that W. E. Henderson has been elected a v.p. and director of Hall-Scott Motor Car Co., Berkeley, and apptd. acting gen. mgr. . . .

The Alger touch—Though under 50, Clarence R. Tucker, acting gen. mgr. Santa Fe Railway Coast Lines, L.A., goes to Chicago as asst. v.p. and Earle E. McCarty, gen. mgr. of Coast Lines, returns to duty at L.A. following war service as director of railway transport dept. which "got the boys home." . . . Other shifts in Santa Fe personnel are appointment of A. B. Enderle as supt. of Los Angeles division from post as supt. of Albuquerque division . . . James W. Murphy becomes supt. Arizona division, Needles, Calif., and A. J. Smith, supt. at Needles, succeeds Enderle as supt. of Albuquerque division. . . .

L.A. Council of West Coast Electronic Mfrs. Assn. got together recently and elected Lew Howard, mgr. of Peerless Electrical Products Co., chairman; D. A. Marcus, mgr. for Electronic Specialty Co., vice chairman; and James L. Fouch, pres. of Universal Microphone Co., treas.

In line with new technical service to users, Bethlehem Pacific Coast Steel Corp. has added to staff: Frank C. Smith, S.F., is in charge of Pacific Coast metallurgical contact. Assisting him are: E. S. Underwood and J. A. Chalk, L.A., A. B. Kreider, Seattle, and C. C. Brumbaugh, Portland. John C. Trawatha, So. S.F., E. A. Cocanower, Seattle, and George C. Stetter, L.A., will keep an eagle eye on field and ind. applications of steels produced on Pacific Coast. . . .

Capt. Lloyd B. Hughes leaves Navy service to accept post as asst. to port mgr. of Port of Oakland. . . . When Kenneth R. Hammaker, dist. director of OPA, finally called it quits and resigned, Edward J. Bennett, asst. dist. director, stepped into his shoes . . . J. E. Orr, asst. mgr. of Du Pont Co., N.Y., comes to S.F. as mgr. of explosives dept. of Du Pont. . . . Lewis Lapham rejoins American-Hawaiian organ. as asst. to pres. with hdqtrs. in S.F.

William E. Cranston upped to pres. of Thermador Electrical Mfg. Co., L.A., from job as v.p. & gen. mgr., succeeding Harrison H. Fogwell who becomes chairman of board. Other changes include Clyde I. Harding as v.p. in charge of prod.; F. M. Pence, v.p. in charge of engineering, and Frank A. Ballman, v.p. in charge of sales. . . .

When D. D. Tripp, v.p. of Pioneer Rubber Mills, retired after 46 yrs. of service, G. S. Towne advanced to chairman of board, H. R. Mansfield to pres. Three new v.p. are: E. P. Coxhead, S. M. Suhr and F. W. Swain. (Swain in charge of factory operations, Pittsburg, Calif.)

J. B. Cary, J. M. Hait, P. C. Wilbur

(Continued on Page 64)

# NEW



**METHOD**  
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in  
companies  
like  
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This up-to-the-minute news-picture magazine shows how wide-awake management in many lines of business is utilizing palletized

unit loads and fork trucks . . . to end the burden of costly manual methods and speed production.

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# WESTERNERS AT WORK...

(Continued from Page 63)

and B. C. Carter elected v.p. of Food Machinery Corp. . . . Cary is pres. of Niagara Sprayer and Chemical Division, Middleport, N.Y.; Wilbur is in charge of central research at San Jose; Hait is director of engineering for the corp.; and Carter is controller of Food Machinery Corp. . . . Howard C. Lisle, former mgr. of John Bean division, Lansing, Mich., will manage combined operations of the Bean-Cutler division at San Jose and Lansing. . . .

A. D. (Al) Schwaner elected pres. for 1946 of Cal. Processors and Growers, Inc.; he's with F. M. Ball Co., Oakland; A. W. Eames (Cal. Packing Corp., S.F.) elected v.p.; and John W. Bristow, sec.-treas. . . .

Officers elected by the Cannery League of California for 1946 are: L. E. Neel, Turlock Co-operative Growers, pres.; A. W. Eames, Calif. Packing Corp., and L. J. Taylor, Libby, McNeill & Libby, v.p.'s, and A. R. Plummer, Kings County Packing Co., Ltd., treas.

Alexander R. Heron retires from directorship of California Reconversion and Reconstruction Commission to return to former work as industrial relations director for Crown-Zellerbach. Earl Washburn, deputy director and former Buick dealer in Richmond, moves up to fill the vacancy.

New government agency, War Assets Adm. gets Serge F. Ballif Jr. deputy RFC reg. director, L.A., as southern Cal. and



FRANK C. SMITH  
Bethlehem



E. E. McCARTY  
Santa Fe

Ariz. director; E. M. Richardson, Arcadia, assoc. reg. director; and John F. Taggart, J. H. White and Gerald G. Smith as deputy reg. directors.

Neal Benjamin Milnes appointed property and maintenance mgr. for five Los Angeles plants of Hoffman Radio Corp., succeeding Charles Walroad who resigned to return to former position as asst. mgr. with a motion picture studio.

Stanley Plumb, Los Angeles, sec. of Southern California Aircraft Industry, and William Hern, Berkeley, formerly executive asst. to industry members of 10th

Regional War Labor Board, appointed as additional alternate industry members to 10th Regional Wage Stabilization Board.

Clarence M. Young, San Francisco, appt. by President Truman as member of Civil Aeronautics Board, is first Westerner ever appointed to the Federal agency. Young fills vacancy caused by resignation of Vice Chairman Edward P. Warner who resigned as head of Pan American Airways' Pacific division. . . .

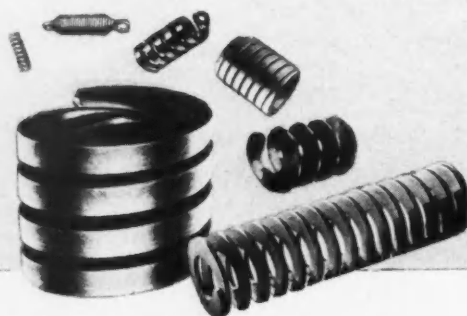
George R. Langlois, former vice-president of the NAM, became general sales mgr. of Muirson Label Co., Inc., San Jose.

Col. Alvin E. Hewitt, prewar Pacific Coast manager of NAM, gets release from army and becomes executive v.p. of California Manufacturers Association. Al Brechtel, heretofore general manager, now becomes manager of Los Angeles office.

## Colorado

When Dr. Walter Miller retired as v.p. in charge of mfg. for Continental Oil Co. he couldn't take it easy—he accepted post as consultant on refining techniques and operations with Universal Oil Products Co. . . . J. Kenneth Malo (ex-Navy Lt.) resumes his old position as v.p. of Intermountain Elevators and Fort Morgan Mills. . . .

At Pueblo, A. F. Franz transfers from Buffalo where he was supt. of Wickwire-Spencer Steel division, CF&I, to take job as works mgr. of Colorado operations, post held by the late Louis F. Quigg.



## INTENSIFIED RESEARCH DEVELOPS New Knowledge of Springs

● New techniques were developed during the war for utilizing new spring materials and making better use of the old. Range of effective usages has been considerably increased. Heat treatment, heat setting and spring metallurgy have been continuously refined—for general as well as special applications. More intricate shapes and bends can now be made, creating opportunities to effect economies in production—or improve performance of spring actuated parts—through new design or re-design of springs. *Investigate!* Discuss your spring requirements with our engineers.

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exec. v.p.; J. D. Sullivan upped to v.p. and gen. sales mgr., steel division. . . .

G. N. Staples, gen. mgr. of Colorado Supply division, elected v.p. CF&I with complete charge of division. N. K. Martin apptd. asst. gen. mgr. supervising Pueblo store.



PAUL C. CHILDS      RALPH K. BEALL  
Earl M. Jorgenson Co.

#### Montana

Maj. Gen. Ralph Royce, retiring air hero, will be associated with Great Northern airlines, new air route between Chicago to Seattle-Tacoma, hdqtrs. at Great Falls. . . . Ed Klies, Great Falls, is pres. of new outfit. . . .

Farmers Union Oil Co., Wolf Point, elected Oscar Horsford, pres.; Martin Beck, v.p.; Harold Bowden, sec.-treas.

#### Nevada

The Tonopah and Goldfield RR Co. has apptd. C. A. White, Tonopah, as gen. supt. in charge of all operations. . . . F. W. Im Masche, pres. of Goldpoint Mining Co., Esmeralda County, Nev., Lt. Col. in Air Corps, recently awarded the Legion of Merit for his work with the air forces during the war. . . .

Carl C. Ernst, elevated to v.p. and gen. mgr. of California Electric Power Co., from Nevada post. . . . Joseph F. McDonald, Jr., Reno, apptd. district information exec. for OPA with headquarters in San Francisco, succeeding Rector B. Fuhrman. McDonald's territory will include Nevada and adjacent areas. . . .

#### Oregon

Wilson English will act as head of district office of CPA in Portland; Portland is in CPA region nine with hdqtrs. at San Francisco. . . .

Col. Theron D. Weaver is on the job as division engineer of the reestablished North Pacific Engineer Division, Portland; the division comprises Portland, Seattle and Alaska districts; Col. George J. Zimmer is exec. officer of division and Roy Scheufele is chief administrative asst. . . .

When O. L. LeFever was named chief engineer of Northwestern Electric Co., Portland, Tom Perry was upped to gen. supt. . . . Harley Joslin, old hand at the canning game, is new supt. for Pendleton Canning & Frozen Foods Co. . . . H. R. Hudson will manage Van Vleet Lbr. Co., Rainier, which Donald and Lee Doud of Tacoma just took over. . . . Guy Haynes, Carlton, is new pres. of Willamette Valley Lumbermen's Ass'n; T. V. Larsen, Noti,

(Continued on Page 66)

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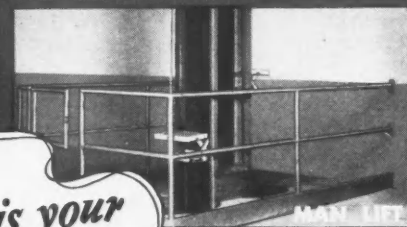
ELEVATING RAW MATERIALS



BATCHING ROCK PRODUCTS

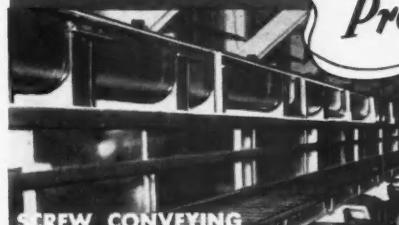


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• OIL FIELDS



# WESTERNERS AT WORK...

(Continued from Page 65)

v.p.; and Frank Graham, Jasper, treas.

E. F. Sweeney, Portland, Pacific Northwest manager for Moore - McCormack Steamship Co., shippings for Soviet Purchasing Commission, promoted to manager of Philadelphia office. C. J. Graveson at Seattle will supervise Northwest operations.

## Utah

Joseph S. Willes, Salt Lake City, is War Assets director for Utah, Idaho and Nevada. . . . Orson John Hyde, Salt Lake

City, upped to Utah commercial supt. of Mountain States Telephone & Telegraph Co., and his old post is assumed by John E. Buckwalter, former Provo dist. mgr. J. LeRoy Bickmore, dist. comm. supv., S.L.C., takes Buckwalter's old job, and John W. Snell will handle Bickmore's.

Prof. J. J. Hayes, S.L.C., head of math. dept. Univ. of Utah, is new pres. of Rocky Mountain Federation of Mineral Societies, succeeding A. L. Flagg, Phoenix, consulting engineer. Chester R. Howard, pres. of Mineralogical Society of Colo. becomes

v.p. and Mrs. Charles Lockerbie, S.L.C., sec.-treas.

Utah Cannery Assn. picked Earl A. Randall, North Ogden Canning Co., as 1946 pres., and Victor R. Smith, Smith Canning Co., Clearfield, v.p. . . .



WM. E. CRANSTON H. H. FOGWELL  
Thermador Electrical Mfg. Co.

## Washington

Arthur W. Berggren is new gen. mgr. of Northwest Door Company, Tacoma—Berggren transfers from exec. position with Rayonier, Inc., New York. . . . Dewitt E. Wallace, former dist. mgr. of WPB, Spokane, will head Spokane field office of CPA in charge of vet housing. . . . George Thayer, formerly with Sinclair Refining Co., apptd. new supt. of production control for Seattle Gas Company. . . .

At Paragon Plastics, Seattle, R. P. Rindler, mgr., resigns to enter own business and is succeeded by Earl Peterson, Seattle. . . .

Hugh Scott, ex-lt. col., acting mgr. of Seattle CofC Washington office, will be asst. to Christy Thomas when he arrives to take helm. . . .

A. H. Fielder upped to supt. of motive power of western district of Northern Pacific, headquartered at Seattle.

Charles R. Evans, Seattle diesel expert, returns to Evans Engine & Equipment Co. from Navy post. . . . Gordon Tongue resigns as sec.-treas. after nearly 33 yrs. of service with Superior Portland Cement, Inc., Seattle, to join C. E. Howard & Co., L.A., stainless steel fabricating firm; George A. Campbell, auditor, steps up to treas., and Jack B. Loughary will be sec.

James D. Essary Jr., former Naval Commander, is new mgr. of Boeing's newly-created labor relations dept. and Fred Huleen, wartime personnel and labor co-ordinator, is upped to asst. mgr.—new dept. will represent ind. relations director in union negotiations. . . .

John R. Meek, superintendent of the Trentwood rolling mill at Spokane under the Alcoa regime, has been chosen by Kaiser to be the new Trentwood works manager. Norman L. Krey, Alcoa's plant superintendent at Messina, N. Y., becomes Kaiser's superintendent at the Mead reduction works at Spokane.

## Wyoming

Arthur E. Stoddard, former supt. of Wyoming division, has been named as asst. gen. mgr. of eastern district of Union Pacific, with hdqtrs. at Omaha. . . .



Valve and piping failures are both costly and dangerous. Here is a simple formula for their prevention:

You can depend on Thaler to adhere to this formula—to supply you with pipe, valves and fittings of the highest quality; to help you with your specifications and with the solution of your piping problems. Let our selection be your guarantee of efficient performance, safety, and economy.

\* The stamp of a reputable manufacturer on every item you install.

\* The careful, expert selection of each item for the job it is intended to perform.



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# REGIONAL REVIEWS

## CONTINENTAL DIVIDE

**D**ENVER—More people are thinking of the West and its Rocky Mountain region than at any time in the past generation. And it isn't the old "Go West, young man," idea that Horace Greeley voiced so effectively, to inflame easterners with Pike's Peak fever away back at the beginning of the 1860's.

This time it is Westerners themselves who are discovering the West, and a lot of them are wondering what to do about it or with it. Many people up and down the Continental Divide are doing some worrying on the subject, as are thoughtful people on the Coastal fringe of the 11 Western states. And it isn't that hopeful signs and inflationary, boomtime conditions are lacking in the West. The puzzlement concerns not today nor tomorrow but the day after tomorrow.

The ferment is coming from a new element of leadership, which may be something of a surprise to those who have wondered why so little leadership is coming from the large and well-established industrial, financial and commercial enterprises of the West.

These new leaders have grown tired of waiting. They are beginning to wonder what ever caused them to expect vigorous and progressive leadership from those elements of the citizenry who already have things pretty much their own way, or have accumulated sufficient means and comfort to be able to withdraw to the sidelines where there is less danger of losing money or prestige.

### Embarrassing Questions

Tomorrow's champion often is today's challenger. Some very challenging and embarrassing questions are being hurled these days in the mountain-and-prairie states. Here is just one sample question:

*Why is there so much hush-hush about Denver's fast-growing textile industry?* Handsome, well-made shirts for men now are selling like hotcakes in Denver stores to customers who would be dumbfounded to learn that the shirts are made in Denver. The George W. Prior Co., is the manufacturer, in this instance, but there are many other Colorado firms producing or processing items of one sort or another that are virtually unknown to customers in the Western states. It would take a trained detective to ferret out these manufacturing concerns and their Western-made products, and it would take a mind-reader to explain why these firms virtually hide their products from buyers in the closest-to-home-market.

The answers to this and similar queries would include remarks about the negative policies of the Denver Chamber of Commerce and the Colorado State Chamber of

Commerce. And *their* answers, when all the steam had blown off, would probably reveal that two great fears still dominate the thinking of industrialists in the Colorado area: (1) fear that "outsiders" will see what a good thing this area is for processors and manufacturers, which might mean that the established firms wouldn't have things quite so much to themselves, and (2) fear that labor leaders might decide to do a more vigorous job on

behalf of organized and unorganized workers if it appeared that Colorado's payroll enterprises really are making progress.

Areas more advanced industrially must have gone through this "fear" stage; what Colorado needs now is some sound advice from manufacturers and other industrialists who can see beyond the noses of the local tycoons, which seems to be about as far as most of them can see.

### City Makes a Profit

Bruce Gustin, who writes his "That's That" column in the Denver Post under his own name since the new publisher, Palmer Hoyt, took charge of the paper that claims to be everybody's Big Brother, has figured that the City and County of

## Ingenious New Technical Methods

To Help You with Your Reconversion Problems



### New Portable Grinder Lasts Longer ... Increases Production

The Portable Gaston Grinder is designed for the grinding and sanding of metal—also, with wire brushes, for paint and rust removal. Because it is powered by a 3-phase motor, without brushes, commutators or gears, the Gaston will give long service.

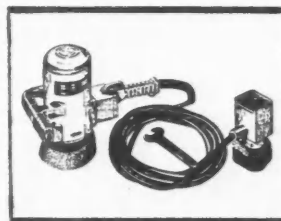
The Gaston Grinder starts at full speed. Its speed remains constant regardless of extra pressure by the operator. This controlled speed under heavy load, eliminates glazing of the grinding wheel; produces a better ground surface.

Three sizes of dust-tight Gaston Grinders are available. Furnished in either "cup-wheel" or "edge-wheel" type, as desired.

In a dusty work atmosphere, that causes throat irritation and dryness, chewing Wrigley's Spearmint Gum helps keep workers' mouths moist and fresh—thereby reducing work interruptions—and "time out" to the drinking fountain.

Workers can stay at their machine, while chewing Wrigley's Spearmint—even when their hands are busy. There is no lost time. And the pleasant chewing helps keep them alert and wide-awake. One Connecticut manufacturer with a dust problem reports group production up about 3% over normal, when workers were given chewing gum. Other plants and factories everywhere, claim stepped-up efficiency when chewing gum is made available to all.

You can get complete information from William H. Howland  
2533 East 73rd Street, Chicago 49, Illinois



The Portable Gaston Grinder



AA-68

Denver is making a clear profit of \$90,000 a year or *nine million per cent profit* from its deals with various airlines for facilities at Stapleton Field.

The city obtained the government-built modification center at the airport for just \$1.00. All available hangar and office space is being rented at 45 cents per square foot. When the space is all leased, the city's gross revenue will be about \$160,000 a year, out of which perhaps \$70,000 a year will be needed to pay for heat, maintenance, etc. That will leave a net profit of \$90,000 a year on an investment of \$1.00, which Mr. Gustin says is 9,000,000 per cent.

What the airlines are saying is hardly publishable.

What Mr. Ben F. Stapleton, the mayor, has to say is that the deal will pay all operating expenses at the city's airport, of which the modification center is only a part, so that the taxpayers won't be out anything. As a matter of fact, most Denver business men think their mayor did a pretty smart thing in finding a way to make the airport pay its own way, rather than having it become a greater burden to the taxpayers.

#### "Big Dan" a Hero

Western railroaders know "Big Dan" Cunningham as one of the most colorful old timers in that colorful business. A book about Dan's experiences during the rugged days of railroading on the Moffat and Rio Grande lines will be off the press soon

under the title, "Over the Top of the World." The book is profusely illustrated with pictures from the historical files of the Rio Grande and the Denver & Salt Lake (Moffat) railroads, as well as from Dan's own collection made during his earlier days in Virginia. For many years Cunningham was master mechanic on the Salt Lake division of the Rio Grande.

#### More Power for Denver

More power to serve industrial and domestic needs in South Denver will be provided by a \$460,000 terminal substation being built by the Public Service Company of Colorado. The new station will have capacity of 20,900 kilowatts and will be Denver's third major high-voltage substation. Power will come from the 110,000-volt steel tower transmission line linking Denver with the company's Valmont plant near Boulder, which is a steam plant burning lignite coal from the nearby northern Colorado mines. A number of hydro plants in the state are tied into the Public Service Company generating system, which includes several lines across the Continental Divide. Immediate expansion plans of this firm involve expenditure of millions.

#### Beetmen Optimistic

The beet sugar industry is riding on the government's coat tails again this year, and had to exercise its full strength to wangle workers from Mexico in addition to many thousands of prisoners of war whose return to their homelands was scheduled to have taken place before now. This year labor still presents a problem to the farmers who raise sugar beets and to the processing companies that have carried much of the burden of keeping America supplied with sugar during wartime. But the industry has a gleam in its eye these days, because another year or two will see the end of the painful era of being dependent upon cheap labor, which usually meant labor that couldn't find jobs anywhere else.

The emancipation of the industry has been accomplished by technology, first in developing a type of seed that eliminates most of the "stoop labor" used in thinning and blocking the young beets to insure a maximum crop. Then the manufacturers of farm machinery began to prick up their ears as they saw that this great industry is ripe for mechanization. Today a dozen of the great machinery houses have newly perfected equipment in the fields, taking care of every stage of beet culture and completely wiping out the need for beet field "labor" in the old sense of the word. Now the farmer and his hired man can handle the crop with machinery, easily and profitably.

The significance of this revolution in the production of sugar from beets is not readily appreciated, but an interesting book could be written about the consequences. Most important for the mountain-and-prairie states is the realization that the beet

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sugar industry now seems able to stand on its own feet, sans subsidy, and consequently will cease to be a political target for well-heeled eastern interests that prefer to see the United States dependent upon foreign countries and possessions for a supply of sugar. As for the Spanish-Americans, Mexicans and others who formerly worked in the beet fields, they have already forsaken the farms for more profitable year-around jobs in the towns and cities. With another generation of education, their assimilation into the general populace will have been accomplished. Thanks to technology, one more tough "minority problem" is being licked.

### "Grandfather Boettcher"

This month Charles Boettcher celebrates his 94th birthday, a very happy man. He lives in the Brown Palace hotel, owned by his family, in Denver. A few blocks up 17th street, in a Boettcher-owned building, the great Boettcher industrial empire has its headquarters.

Cement companies, by various names and with plants up and down the mountain states, are a pivotal part of that empire. Beet sugar companies are a major part of it. And in recent years the family fortune, now estimated at somewhere between thirty and sixty millions, has been engaged in more modern enterprises such as airlines and only the Lord and the Department of Internal Revenue know what else.

Greatest satisfaction in the life of the grand old man who is considered the founder of the American beet sugar industry is the gratitude of the crippled children who attend the Denver public school that bears the Boettcher name. Here in the country's most modern school building, designed by architect Burnham Hoyt to meet the specialized needs of crippled children, a little of the wealth piled up by Charles Boettcher is playing an important part in bringing straightened bodies and happy hearts to scores of unfortunates. Just what the ultimate disposal of the great Boettcher fortune will be remains a mystery, but this first publicly-known bequest has been as great a success in its field as were the empire-building industrial achievements of the man the grateful crippled children address as, "Dear Grandfather Boettcher."

### More Metals from Abroad

The West's great mining industry was virtually flat on its back this month, with mills and smelters shut down by one labor dispute and all of the coal mines shut down by another. Mining of gold, silver and other precious metals gradually is coming out of its wartime state of complete paralysis, but for every ounce of energy being put into ore digging there are two ounces going into assorted groans, pleas and prayers for Congressional action to boost the prices paid mining companies for gold and silver.

In a few spots, notably Colorado's

Cripple Creek-Victor area and South Dakota's great Homestake mines at Lead, the mining of precious metals is really swinging into high gear with emphasis on production rather than on argument. But the great problem of the mining industry and of the West aroused little attention as several large American metal mining companies moved step-by-step to switch their major production to properties owned in foreign countries, while tapering off their production in the U. S.

Latest step in this chain of circumstances was the agreement reached early in April, which provides for the U. S. to buy 100,000 tons of Latin-American copper for delivery this quarter. The price agreed to is 11½ cents a pound at Chilean ports, up

more than half-a-cent over the wartime contract price. Anaconda Copper Mining Company and Kennecott Copper Corporation will supply the metal from their properties in Chile. Similar contracts are being negotiated with Cerro de Pasco Copper Corp., for a proportionate tonnage from Peruvian mines.

It may not be noticeable for some time, but before long the consequences will be evident in the West as large American mining companies with properties both in the U. S. and abroad shift their production emphasis from the mines in Montana, Utah, Arizona and other Western states to foreign properties where production costs are lower and profits consequently higher.



## THANK YOU LADY!

Yes, we thank the lovely lady in the illustration for posing so gracefully with that fine Manila Rope in which she is so enthusiastically entwined.

Unfortunately, however, the supply of Manila fiber is still extremely limited and it will probably be some time before Manila Rope will come out of the "scarce" class.\*

You may be sure that this organization is doing everything possible to hasten the day when you can once again get all the Manila Rope you want from your supplier.

One thing you may be sure of — when you see the famous trademark of Tubbs Extra Superior Manila, it will be a rope built to highest standards of perfection and made from only the very choicest Manila fiber. *It will be a Rope worth waiting for!!*

\*Even though new government regulations permit the making and use of Manila rope (1½" dia. and larger), fiber supply is far insufficient to fill the demand.



Something to look forward to—this famous rope trademark.





# REGIONAL REVIEWS

## SIERRAS TO THE SEA

**S**AN FRANCISCO — Industrial development in California promises to be considerably facilitated through a new plan for setting up industrial areas to provide needed services for industries not large enough to set up their own facilities. It is already in prospect for the Pittsburg area and also may be utilized by Long Beach.

Pittsburg is located at the confluence of

the Sacramento and San Joaquin rivers and just above the head of Suisun Bay, and has a number of large industries, such as Columbia Steel Company, Shell Chemical Company, Dow Chemical Company, Johns-Manville, Redwood Manufacturers Association, Pioneer Rubber Mills, the Booth cannery, the Defense Plant Corporation foundry adjacent to Columbia Steel and the former Arcrods plant owned by

DPC. At Antioch, a few miles up the San Joaquin river, are Fibreboard Products Company and a plant under construction for its subsidiary, Glass Containers, Inc.

These big companies took care of their own water supply and sewage disposal problems, but smaller industries and remanufacturers who tend to locate near large factories had no service facilities if they wanted to establish themselves outside an incorporated city.

So, under the inspiration of E. L. O'Hara, city engineer and manager of Pittsburg, the Pittsburg Industrial Utilities District is being organized. It will include the city itself and a large amount of land outside, including sites for port facilities. The district proposes to construct wharves and docks, in addition to building water and sewage systems.

This development is possible under a state law which heretofore has been used only for obtaining a water supply, as in the case of the East Bay Municipal Water District or for electric power, as was done in the Sacramento area. The law requires that such a district can only purchase or operate revenue producing facilities, so it will confine its activities to such services as can be charged for. Probably the method of financing will be by revenue bonds.

### Attractive to Manufacturers

The larger manufacturers in the area are reported to be greatly interested in the project, because it will help to attract remanufacturing operations close by. The district could start bus lines or even provide railroad facilities, although the latter are not needed.

The Contra Costa canal, which gets its supply from the San Joaquin river, could be made available for additional industries if a reservoir were built for local storage of water.

Long Beach, in southern California, has a similar problem of providing facilities for area surrounding the city that is now needed for industrial development, and officials of that city are giving the Pittsburg plan close study.

Oakland feels that its program for developing movement of deep water tonnage through the Oakland harbor, interrupted by the war, may now be resumed. This is a result of the Army's agreement to return the berthing areas in the outer harbor area adjacent to the Bay Bridge approach that it acquired by condemnation in 1941 for war purposes.

### Dock Facilities Returned

Although the Army and Navy still retain a substantial portion of the waterfront, the existence of these government facilities will in itself provide considerable tonnage because of the movement of supplies in and out. The Naval Supply Depot remains, and the Army keeps Camp Knight, but the Port of Oakland gets back a 4,000-foot frontage of wharves and

### Government-Owned Surplus

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**Heald Borematic Machines**, Model 47-A, heavily constructed for high degree accuracy in boring, turning, facing, grooving, chamfering and slotting irregular surfaces.

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**Heald Cylinder Grinders**, Model 50, complete with standard equipment for internal grinding of steam, auto, aircraft and pump cylinders.

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warehouses with facilities for eight large ships and 30 acres of open storage land.

One of the future developments that the San Francisco Bay Bridge Authority has in mind is a transcontinental rail terminal to be built on the tide flats just north of the toll plaza. This would bring the railroads much closer to San Francisco, and permit the use of buses to transport passengers into the city. But even if the ferryboats from the Southern Pacific and Western Pacific terminus at Oakland Pier are slow and cumbersome, the ride across the bay is something that would be greatly missed.

### San Francisco Seeks Industry

In times gone by it was a common saying that San Francisco didn't particularly care whether it had any more industries or not, and that the city was content to drift along in dreams of the past. But the publication by the San Francisco Chamber of Commerce of a 38-page brochure titled "The San Francisco Bay Region as a Factory Location," is a distinct proof that the "serene, indifferent to fate" era has gone.

This study is a factual presentation of the opportunities, impartially stated, so that a manufacturer intending to locate in the area can figure out whether it will be worth his while. Detailed tables of freight rates and other data are included. The survey, which shows there are over 4500 diversified factories in the area, was produced under direction of G. L. Fox, manager of the industrial department of the chamber.

One of the most important developments indicating the forward trend in the Bay area is the announcement of United Airlines that its maintenance and repair base, now located at Cheyenne, will gradually be moved to the San Francisco Airport. Ultimate employment at the base will be around 6,000 persons, it is reported. President W. A. Patterson said present long range planes and the development of overseas business made it imperative to establish the base at one end of the transcontinental run, rather than in the middle.

### \$35 Million for Housing

Housing construction planned or under way in the Bay area is reported as totaling over \$35,000,000 and involves nearly 3,500 residences.

Some of the large projects under way are located as follows: Corte Madera, 661 units, \$7,000,000; San Carlos, 208 units, \$2,000,000; Palo Alto, 100 units, \$1,000,000. Other projects planned were in Redwood City, 700 units, \$10,000,000; San Mateo, 600 units, \$5,000,000; and San Mateo County, 700 units, \$7,000,000.

Industrial development projects representing 63 new plants and 51 expansions in Northern California, were announced for February by the San Francisco cham-

ber's industrial department, and brought the cumulative for the first two months to 212 projects with outlays of \$188,647,800 compared to 85 projects with total expenditures of \$12,071,000 during the same period last year. Bay area projects total 92 with expenditures of \$7,373,000 or more than double a year ago.

The San Francisco Stock Exchange recently reported that during the past six months this Exchange had moved up to second place among the regional Exchanges in the nation.

Tourist and convention visitors to San Francisco this year will probably be the second highest in the past 20 years, according to the estimation of the Convention and Tourist Bureau.

### Frozen Foods Figures

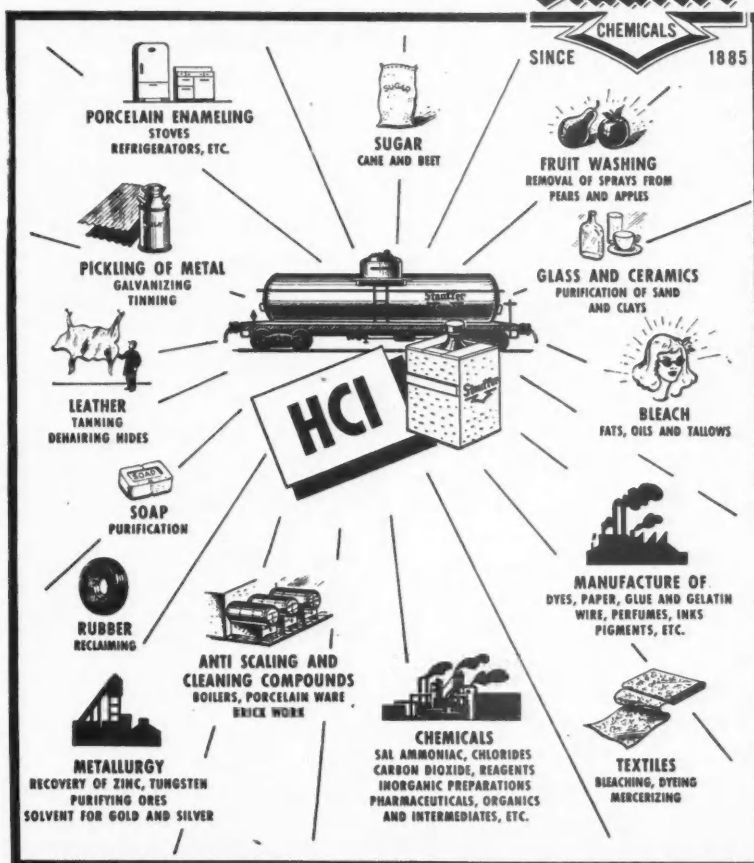
California production of frozen fruits and vegetables in 1945 totaled 214,606,240 pounds, almost twice the 1944 total of 114,184,775 pounds, and about three times the 1943 pack. Frozen fruits and berries accounted for 166,531,761 pounds. Apricots led with 50,619,008 pounds, apples and apple sauce were second with 44,768,160 pounds, clingstone peaches third with 26,995,833 pounds and free-stones fourth with 23,004,394. Broccoli led the vegetable procession with 8,675,197 pounds, spinach and Fordhook beans were close behind and asparagus fourth. The report was from the Western Frozen Food Processors Association, of which A. H. Harrison is managing director.

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## REGIONAL REVIEWS

### TEHACHEPI TO TIJUANA

**L**OS ANGELES — With dark clouds of labor strife fast clearing away, southern California industrialists are beginning to throw out their chests and step out with brisk strides into what seems a bright future.

Not for years has there been such a feeling of general optimism, heightened perhaps by the tenseness and disappointments of the steel strike period. So eminently careful experts as the U. S. Department of Commerce's analysts report a new surge of business confidence, based upon such

sound factors as continuance of retail sales at an all-time peak, with raw materials inventories rising rapidly to bulwark production of goods for which there is an eager, almost brisk, demand.

Though high rents, evictions, and like mishaps are still causing a few enterprises to suspend business, commercial failures are at record low levels, with industrial failures exceedingly rare. Many seasoned prophets are shaking their heads sadly, however, at the rush by veterans into fields in which they have little experience.

Few ex-GI's have the capital to enter manufacturing, but anybody with \$1,000 or so can start a little restaurant or a small store. Much as everyone would like to see these boys succeed, there remains the grim fact that one out of every six new businesses opened during ordinary times, closes again before the year is out. In the case of service stations, the first-year mortality is 33%, among restaurants, 39%. It takes no seer to detect trouble ahead when so many inexperienced hands are trying their luck in competition with professional talent.

#### Friends Again?

Settlement by radio manufacturers of their tiffs with OPA over prices has resulted in a sudden "Cherokee strip" race to see who can first hit the West Coast market with their 1946 models. Large display ads for these long-awaited items have gladdened many a householder's heart, but to many an eye-startled observer, the sudden rush into print seemed a return to the "good old days" when advertising was designed to attract buyers, not to maintain prestige for a company with empty shelves.

Likewise heralding the return to normalcy was the reappearance of men's shorts, long a gilded luxury, on local counters at sixty-nine cents, with one rash merchant even advertising them at fifty.

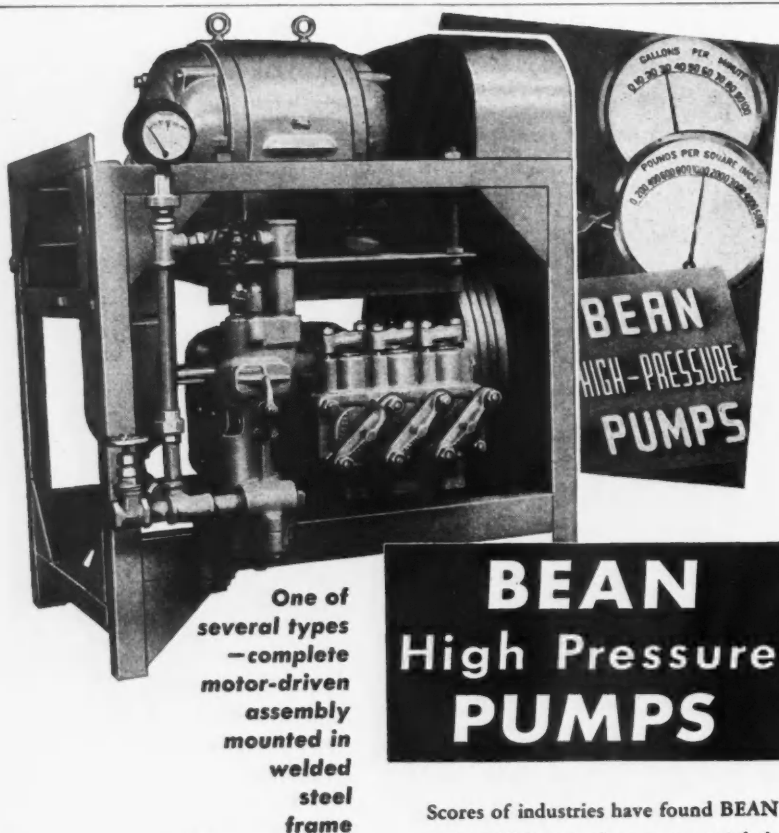
#### Stop Orders Confuse

New controls clamped upon industrial and commercial construction have been accompanied by a whole sheaf of "stop" orders, halting further work on more than 500 projects that had barely started. A goodly number of operators had taken benefit of the doubt by doing some hasty excavation and getting a few loads of lumber delivered on the site. OPA has made it plain that these jobs won't get under the wire, thus shutting off a good deal of plant expansion, as well as considerable development by realty operators building for commercial rental.

Industrialists are anxiously waiting to see how stringent a policy will be adopted by the "construction urgency" committees of local citizens who are to decide what projects, other than housing, are essential.

Similar area production urgency "committees," whose membership was mainly from the military, kept a tight rein during the war on commercial building, but were fairly liberal concerning industrial enlargements. Since the same committee likewise controlled letting of war contracts, it was easy to keep new construction properly scaled to the size of the production job to be done.

Now that the urgent need for specific weapons of war has passed, such committees doubtless will use as a yardstick the amount of employment to be afforded, plus possibly some consideration of the present shortage of the item to be produced. Since by far the largest share of employment in



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#### BEAN-CUTLER DIVISION FOOD MACHINERY CORP.

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southern California, as in other areas, always has been in the service and distributive trades, it is fair to assume that factory expansion may thus be bracketed on the same level with the building of barber shops and department stores, instead of receiving special preference.

Especially is this policy likely while a sizeable number of surplus war plants still awaits disposal to private industry. Some surplus factories, of course, will require considerable alteration to meet the needs of prospective buyers, but chances are that the lid on building may further stimulate proposals as stop-gaps for cramped industries.

### Surplus Factories For Sale

The War Assets Administration, of course, wants to get the plants sold for keeps, but will listen to sound propositions and frequently will lease with option to buy.

Expansion-minded business men are not too happy about the new controls, feeling that perhaps the veteran housing phase is more ephemeral than is generally supposed. They ask, too, what's the use of building houses for people if there aren't jobs for them here?

Against this point of view comes the statement of a local housing official, who says that even if 100,000 homes were built in Los Angeles, there would still be plenty of "no vacancy" signs.

On the other side of the argument, many people sense a gradual tightening of the job market, as veterans continue to pour in not only from the Pacific theater but from other areas of the United States. Perhaps, a year hence, the cry again may be for industries to give new sources of employment. These factors will have to be weighed carefully by the citizen committees, who are shouldering a weighty responsibility as well as a difficult and thankless task.

### Women Bow Out

One interesting observation of USES officials is that while unemployment of men has climbed largely as a result of the return of so many veterans, unemployment of women has not risen nearly as sharply. Yet the number of women actually holding down jobs has fallen off at a rapid rate. The answer seems to be that large numbers of women are leaving the labor market permanently.

Acquisition by Nash-Kelvinator of North American Aviation's former parts handling plant, adjoining the Los Angeles municipal airport, saw the 13th of this area's war plants pass from Government to private control. By a strange, but not necessarily unlucky, coincidence, the firm also is the 13th of Detroit's 15 automobile producers to assemble cars here.

Again braving the fateful numerals, prognosticators estimate that assembly in this area thus will reach approximately 13

per cent of the total national production when in high gear.

### Machine Tools Lacking

A survey by the Department of Commerce's small business unit, née SWPC, turned up some revealing information about the current troubles of little manufacturers. Leading complaint, of course, was shortage of materials, closely followed by delays in getting OPA price adjustments.

Lack of machine tools was a problem frequently solved through sub-contracting, just as in war days—an operation encouraged by the department, which says it is an excellent way to keep capital investment down to good solvent proportions.

A surprising number of business men seem not to know how to go about applying for "CC" priorities when in a difficult spot, not realizing that the needed forms are available from postoffices in most major cities, including San Diego, Los Angeles and Phoenix.

Financing, though low on the list, has proved a problem for some companies. Besides referring inquirers to such orthodox lenders as RFC and commercial discount houses, the department occasionally has suggested a little-known method which deserves better recognition. It is possible, in some circumstances, to borrow on one's inventory of raw or fabricated materials, impounding them in a commercial warehouse which lends upon such security.



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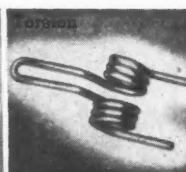
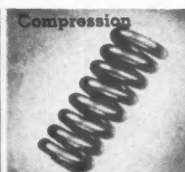
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# REGIONAL REVIEWS

## OLYMPICS TO THE COEUR D'ALENES

**S**EATTLE — Although progress and production on the Northwest Frontier in general stagger along under burdens of government restrictions, materials scarcity and high costs, a few bright shafts of light pierce the murk. While these are not overly numerous, they do give encouraging contrast to present overall drabness and stagnation.

Experimental development of stainless steel alloys from laterite ores in the Cas-

cade Mountains in the Blewett Pass and Cle Elum areas appears probable, with the announced intention of the Cascade Alloys Mfg. Co. of Canton, Ohio, to invest \$100,000 in such development.

If successful, it will be the first time alloy steel has been produced west of the Mississippi River and likewise the first time in U. S. history that an alloy steel has been produced from direct smelting. Cascade Alloys Mfg. Co. is endeavoring

to obtain the use of the government ferro-silicate plant at Rock Island Dam on the Columbia River, 14 miles below Wenatchee.

Another substantial steel production probability adjacent to Washington State is the planned electric smelter at Anyox, British Columbia. Although this location is some 450 miles north of the iron ore deposits on Texada Island (which lies between Vancouver Island and the Canadian mainland), it has the advantage of exceedingly cheap electricity—less than one mill per kw.-hr. — from an existing hydro-electric plant. The latter was used to supply a former copper smelting plant at Anyox. Limestone and silica for fluxes are also in the vicinity.

### Hydro Plant Readied

Workmen are already busy getting the hydro plant in shape, fixing up abandoned housing facilities for steel mill construction forces and repairing docks. Iron ore will be brought to Anyox from Texada by barge. The steel mill is planned to handle 130 tons of ore per day and produce 65 tons of iron daily.

Boeing Aircraft in Seattle recently acquired additional airline orders for its new 100 passenger double decker Model 377 transports. These now total 42, with 20 to Pan American, four to Swedish International, 10 to Northwest Airlines and eight to American Airlines. Coupled with military orders received, Boeing expects to keep 14,000 people busy for some time; nearly half its wartime personnel in Seattle.

The government-owned Boeing Renton plant, costing \$21 million and having its own 200x6,000-ft. takeoff strip, has been put up for sale or lease by War Assets Admr. In its search for new headquarters and maintenance base facilities, Northwest Airlines is making goo-goo eyes at the Renton plant. NWA desires to remove its headquarters from the present location at St. Paul because of Minnesota taxes.

### No Failures This Time

Other transportation items of interest are the almost assured Tacoma Narrows Bridge and the Columbia River ship channel. The new Narrows Bridge, estimated at \$8.5 million, will replace "Galloping Gertie" who twisted and fatigued herself into structural failure during a high wind a few years ago.

The new plans have been formally approved and were developed after considerable aerodynamic research into causes of Gertie's failure. One feature is a number of large slots in the deck to relieve wind pressure. A Columbia River ship channel from Vancouver, Washington (opposite Portland) to The Dalles, Oregon, has been recommended by the Pacific Division Engineer of the U. S. Engineers to his headquarters in Washington, D. C., representing a tangible step in long sought enlarge-

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ment of river freight transportation for Washington and Oregon.

The motor vehicle manufacturing industry is having its ups and downs in Washington State. On the up side, Kenworth Motor Truck Co. has begun building trucks (and will build busses) in its newly acquired plant on Marginal Way in Seattle—which was Boeing Plant 3 during the war and a General Motors assembly plant before that. Fruehauf Trailer will soon begin a trailer plant in Seattle, also.

On the down side is the fact that there will be no more passenger automobile assembly plants in Seattle. With long faces, Seattleites learn that said plants for the west coast will henceforth be in California—probably because of population density. The former General Motors assembly plant has gone to Kenworth—as described before—and although Ford is starting to build a so-called "plant" costing \$800,000 in Seattle, it is only an enormous warehouse and parts supply center.

### The Busy Bee

The bee of activity is starting to buzz in the Columbia Basin irrigation project. Permanent headquarters will be in Ephrata, Washington, close to the center of the Basin. Temporary quarters will be used until a \$200,000 headquarters building is constructed. About half of the 5,300 Basin landowners have signed water contracts.

Several husky bids have been asked and some opened already. Six and a half miles of main canal was bid low at \$619,000 at Coulee City on March 20, there being 16 separate bidders. Pelton Water Wheel Company of San Francisco was low on four pumps, each to handle 720,000 GPM at 270 ft. head, at about \$180,000 per pump. The pumps will hoist water behind the dam up into the irrigation system. General plans now are to have 40 per cent of the Basin irrigated by 1951.

On the food front, the U. S. Department of Agriculture finally backed off on President Truman's order limiting wheat feeding of stock in the Pacific Northwest after much justified pressure was exerted. The U.S.D.A. is allowing 85 per cent of the wheat feeding in the corresponding month in 1945. Military posts in the area are planning vegetable gardens for their own use with prisoner of war labor, per a War Department directive.

An interesting development in sugar production is the proposed levulose sugar refinery of the Columbia Engineering and Supply Co. at Camas, Washington, on the Columbia River above Vancouver. It will extract levulose sugar from artichokes. It is the most digestible of all edible sugars, is non-fattening and is safe for diabetics. Its higher sweetening power over that of cane and beet sugar permits less to be used. Some 30,000 acres of artichokes will be planted near Mount Pleasant, Wash.

### Floating Cannery Leased

A factory ship, complete with refrigeration and canning equipment for the processing of fish, and four trawlers, all of which will have cost the government an estimated \$3,750,000, will be leased to the Pacific Exploration Company of Seattle, Washington, according to a recent announcement by the RFC.

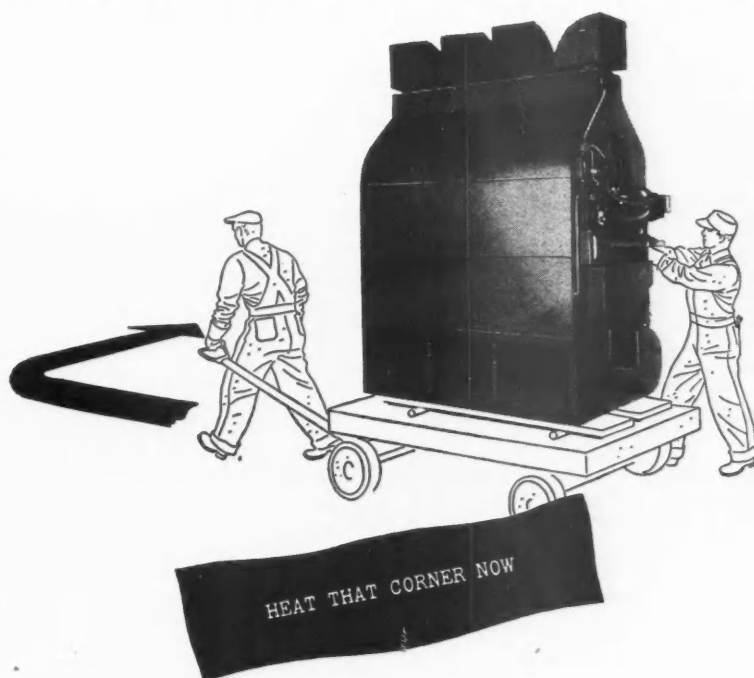
The five unit project was originally sponsored by the War Foods Administration as a means of increasing the nation's food supply during the war.

Its use in peacetime will be for fishing in the Bering Sea and other Pacific areas.

The 8368 ton factory ship, the "S. S.

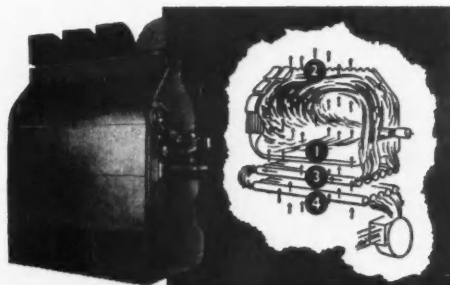
Mormacray," has for several months been undergoing reconversion work at the yards of the Bellingham Iron Works, Bellingham, Washington. The task is expected to be completed early this year. Completed, it will have accommodations for 250 workers as well as office quarters and office equipment. The four diesel-powered trawlers of 165 tons each that will be used for catching the fish and bringing them to the cannery, will either be built or acquired from fleets now in possession of the government.

Continuance of the project in peacetime will further the growth of a modern fishing industry in the Pacific areas.



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## REGIONAL REVIEWS

### THE COLUMBIA EMPIRE

**P**ORTLAND—Expansion of industries in the Columbia Empire, just starting on a major scale with the opening of the 1946 spring construction season, was left staggering by the freeze order suspending so-called non-essential commercial construction.

The setback, however, was in most cases a state of mind rather than an actuality because most large projects were facing serious delays in any event because of material shortages, and definite go-ahead orders for

plant expansions and new plants would have been delayed in many instances until 1947 in any event.

This is not true in every case, of course, but a typical example is the plan of the Quaker Oats Company to move to Portland on a large scale with lease and possible eventual purchase of the extensive Kerr-Gifford grain elevators and dock facilities near Swan island of shipyard fame.

The Kerr-Gifford lease from Union Pacific runs until May of 1947 and Quaker,

still in the initial planning stage, would not start construction of its proposed new cereal manufacturing plant on the site until after that date.

Quaker has leased the present elevators and has acquired adjacent land from the owner, Union Pacific. U.P. will start as soon as possible on renovation of the million-bushel storage and grain handling facilities in the meantime "so they can be used until we decide whether present facilities will be retained as part of the new plant," in the words of R. L. Laird, vice president of Quaker in charge of operations.

The rough figure used for Quaker's proposed Portland addition is \$2 million, but a definite figure has not been announced and will not be until final plans are adopted, according to Quaker officials.

#### What Can Be Done

Other types of industrial expansion not "staggered" by the freeze—at least that is the present assumption—are industries deemed essential under the housing and reconversion programs.

In that category, according to explanations to date, are planned expansions at some sawmill and wood product manufacturing plants.

The Cascade Plywood corporation's \$200,000 battery separator plant under construction at Lebanon, Ore., may be completed, it is hoped, to help supply needed materials for the thousands of motors and transportation facilities needed for reconversion.

That plant, originally scheduled for construction at Salem, the Oregon state capital, was moved to Lebanon after Salem city councilmen declined to make a necessary zoning change for the site chosen by Cascade. Lebanon welcomed the plant with open arms and is helping with labor recruitment and housing facilities for employees.

#### Veterans Wanted

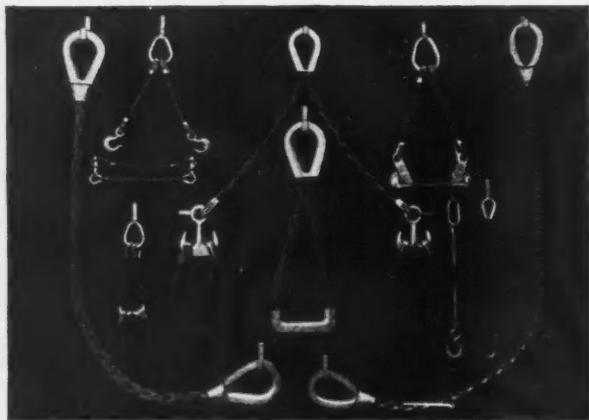
The company has made a statement expected to become more prominent as other new industries are started. It is "We want veterans whose former jobs are not available or who were not employed before the war."

Veterans like the idea, and their influx to communities also brings an influx of HH priorities for new veterans' housing to solve a housing problem that has held back expansion in some localities.

With Coos Bay coal mining in the headlines for several months, another venture is starting in the blanket of coal that underlies the Coast range. The new project is in southern Clackamas county near Wilholt Springs and is expected to produce 600 tons daily for 10 years on the basis of presently ascertained deposits.

About \$8000 has been spent in initial tunneling and equipment and another \$50,000 has been allocated for roads and

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buildings. The product will be packaged bricks of powdered coal.

Coal deposits are known to be extensive from the Columbia to California in Oregon's Coast range and the hills are studded with old shafts like those along Yaquina bay. Coal was mined there in the latter part of the last century for cargo shipment to California before that market was lost to natural gas.

#### Concrete Tile the Rage

New on the industrial front are the concrete building-brick factories being started. Already "the rage" in Seattle, according to local construction men, the concrete tile is being used extensively in remodeling and partitioning of large Portland commercial buildings because of the lack of lumber and plywood—and no priority is needed for this material.

Houses and entire commercial buildings are under construction and a baby industry is well started. In Portland an \$80,000 plant is being readied by S. Carl Smithwick of Spokane, Wash., and Paul Kiemens of Alpena, Mich., who say it will be the largest such on the Pacific Coast and will manufacture blocks for five complete houses a day. A fast steam-curing process is used.

Another plant is due at Dalles, Ore., to serve the Central Willamette valley.

#### Wisco Remains

Sale of the Willamette Iron & Steel Corporation will not take the familiar WISCO from Portland industrial lists. Under the new ownership, "corporation" is merely dropped for "company."

George H. Atkinson, president of Guy F. Atkinson Company, becomes the new president and the firm will complete its present contracts under two divisions. G. W. Wintz, a vice president, will head the commercial division and J. E. Broton, who has been ship repair superintendent, will continue in that capacity.

W. A. Kettlewell, general manager under the former ownership, continues as vice president in charge of operations.

#### New Products Keep Coming

Forty per cent of Monsanto Chemical Company's sales income in 1945 came from products which were either unknown or not produced ten years ago, William M. Rand, president of Monsanto Chemical Company, told the Portland Chamber of Commerce a few weeks back.

Again, he said, many of the things readily and cheaply available today are the results of improved processes which brought the cost down to where people could pay for them.

"I could tell you of incredible new textile chemicals which prevent shrinkage in wool and runs in stocking; which give you a suit that creases only under heat, and then creases durably so that it can be wadded up wringing wet into a suitcase, carried on a journey and hung out

four days later as fresh as if it had just come from a cleaner.

"I could tell you of new insulating materials of such efficiency that they make possible refrigerators with 40 per cent more cubic capacity without any increase in size. I could tell you of new synthetic soaps that won't leave a ring in the bathtub, that leave clothes with that 'dried in the sun' odor, that make dishwashing almost a pleasure.

"As a matter of fact, 64 brand new products came from the laboratories of *our* company alone last year—each may contribute in its way to the comfort, convenience or health of mankind."

#### Coal For Europe From Pacific Ports

Coal shipments for Europe under the UNRRA program are now to be made from the ports of Portland and Seattle, as well as from Long Beach, California.

Evidence of the part that coal is playing in the foreign trade of the 11 Western States lies in recent shipments from Long Beach to the Orient.

A total of 765 railroad cars loaded with 9,300 tons of Wyoming coal, loaded at Rock Springs and Superior, Wyoming, by the Rock Springs Fuel Company, have been sent to the Southern California port for transshipment to China.

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## REGIONAL REVIEWS

### THE WASATCH FRONT

**S**ALT LAKE CITY—Opinion as to the most desirable disposal plan for the Geneva Steel plant from the standpoint of this area is now pretty well crystallized in Utah.

The thinking, both in official and non-official quarters, is heavily in favor of an outright sale with the purchaser assuming the responsibility, financial and otherwise, of converting the facility to civilian production.

This viewpoint, which has had a strong following here since the plant was constructed, has been steadily gaining adherents for several reasons. Most important, perhaps, is the belief that a lease for five or ten years would only continue the instability and uncertainty as to the plant's ultimate fate for the period of the lease.

A lessee, it is felt, would have less incentive for building up permanent market outlets than a purchaser, particularly if the

government subsidized the lease operation. And establishment of satellite plants would be discouraged if the question of disposal (which would necessarily involve the question of continued operation) had to be reopened in five or ten or any other specified period of years.

Senator Abe Murdock (D., Utah) has come out flat-footedly for outright sale if responsible bids are submitted on that basis. And Governor Herbert B. Maw has, by implication, concurred in that view. The governor has emphatically stated his opposition to turning the plant over to "speculative interests without their own capital."

#### Geneva Still a Question Mark

The general assumption, of course, is that if a bid for purchase is submitted it will be United States Steel Corporation. So far as the public record is concerned, the steel corporation has withdrawn as a prospective bidder and has not reentered the picture. But as a result of private conferences and discussions between corporation spokesmen and public officials of Utah, confidence is now high that a bid from U. S. Steel is in the making.

Grapevine reports are that it will be a cash offer for the facilities as they stand, with the corporation financing necessary conversion. Utah is naturally interested in what additional facilities U. S. Steel, or any other bidder, would build at or near the plant site. But whatever assurances the corporation has given on this point are apparently satisfactory to representatives of the state who have discussed the subject.

From the standpoint of Utah, price is a secondary consideration. An operating plant at any price is preferable to a ghost plant or heap of salvage. But it is recognized that taxpayers and competitive steel producers would have just reason for complaint if the plant were sold at a figure far below its value as measured by prospective earnings as a going concern. The hope here is that Washington officials will not confuse fair value with the more than \$200,000,000 which was poured into the steel mill and supporting facilities.

#### Strike Costly

Entirely aside from what the nonferrous mining and smelting industry strike is costing the idle workers and operators, it is taking a sizeable chunk out of the state's tax revenues. On the 89th day of the shutdown of three major producers, the state tax commission estimated that the state, county and one school district had lost \$362,215. Another \$200,000 had been paid out in unemployment compensation to workers made idle by the strike. And relief costs were rising rapidly.

Governor Maw expressed his concern in a statement to the press, declaring that the state would have to step in and press for a settlement if it continues much longer. The miners are asking for equalization with the Couer d' Alene, Ida. scale (which would boost basic rates 55 cents to \$1.35

## HEADQUARTERS

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per day) plus an hourly increase of 21½ cents per hour. The best the companies have offered is a 12½ cent increase when operations are reduced from a 48 to 40 hour week.

Economic Stabilizer Bowles' move to encourage liberal pay increases by upping the maximum metal premiums received a cool reception from the operators. They regard it as a neat device for controlling their profits under the guise of price control. And low cost producers, who cannot qualify for premium payments, are not enthusiastic about dissipating their ore reserves at prices which in some instances are below world levels.

### Jobless Increasing

Post-war unemployment, which many expected would appear in volume shortly after V-J Day, is belatedly beginning to show up. About 17,000 jobless Utahans were drawing unemployment compensation at the beginning of April and total payments were well above the \$1,000,000 per month mark. The reserve of 30-odd million dollars built up during the war is looking smaller every day.

Only a small percentage of the jobless receiving compensation were a product of the mine and smelter strike, inasmuch as Utah law makes strikers ineligible for payments. A good share of them were recently returned veterans who are not disposed to take the jobs currently being offered.

### McCarran Asks Aid For Gold Miners

Loaned without interest and repayable in the form of a five percent royalty on future production, money will be lent for the rehabilitation of precious metal mines—if a bill drafted and introduced by Senator Pat McCarran of Nevada becomes law.

If passed mine owners could borrow money in amounts determined by a formula which would take into consideration the normal pre-war annual production of the mine and the length of time it was closed under the WPB's shut-down order that closed gold and silver mines during the war.

Application for loans would be cleared through the U.S. Bureau of Mines, according to the bill, which would pass upon the statements they contained.

Arguments in favor of the bill assert that it should be passed since precious metal mines formed the only industry in the country to be closed down by government order during the war.

### Man Converts Materials To His Needs

"The coal and petroleum age may end, but sugar can be produced indefinitely," Dr. R. C. Hockett, scientific director of Sugar Research Foundation, told members of American Society of Sugar Beet Technologists at their recent biennial convention in Denver.

"From a chemist's viewpoint, man does not have to use material as it comes from nature, but may convert it to new products more suitable to man's needs," he said.

For example, during the war, 900,000 tons of sugar were converted into alcohol and used in the production of synthetic rubber. Alcohol, blended with high octane fuels, gives better performance and will help stretch precious petroleum supplies, he said.

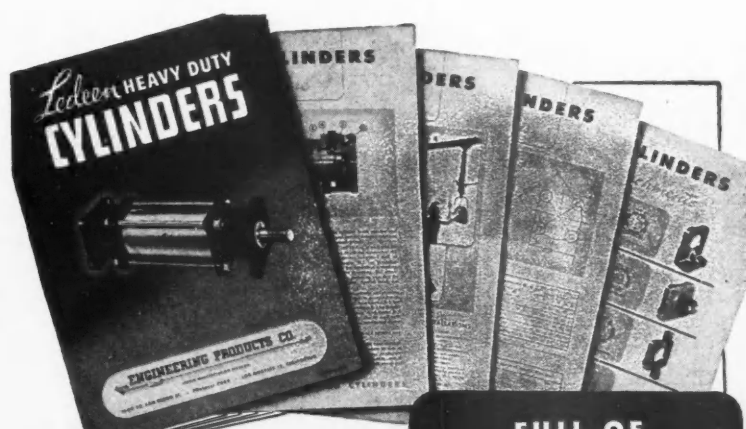
Numerous potential uses for sugar have barely been explored. Among some new uses, Dr. Hockett cited citric acid, formerly produced only from fruits, now made by fermentation of sugar molasses, and dextran, a thickening agent used in

great quantities by the pharmaceutical industry, which is made by a breakdown of sucrose through fermentation.

### Gas-Turbine Engines Possible For Autos

Automobiles powered by gas-turbine engines may be replacing other types of automotive transportation on the country's roads within the next ten years, according to a recent statement by Paul Pitt, engineer of the Solar Aircraft Company plant at San Diego.

Pitt said that the gas-turbine engine, providing oxygen and pressure-injected fuel, should experience sufficient developments in the next decade to make it practical for motor cars.



BULLETIN  
453



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# LABOR

## AND THE INDUSTRIAL WEST

**C**OSTLY as the recent machinists' strike in the San Francisco Bay area was, with not a wheel turning in some 150 establishments for 140 days, it was a very satisfactory proof to industry that management can stick together.

In addition to the machine shops themselves, who felt that acceding to the union demands for "30 per cent or else" would put them completely out of competition with any other area in the country, there was a substantial group of "fringe houses" who were not so vitally concerned but nevertheless stood pat until the end.

One conspicuous exception to the management solidarity was the breweries. This group felt they were more vulnerable than other "fringe houses," on account of union bartenders, truck drivers, etc., and agreed right at the start with the two striking unions, Lodge 68 (AFL) in San Francisco and 1304 (CIO) in Oakland, to pay the

30 per cent increase to their machinists. So their product rolled out to customers as usual, while coffee and cereal plants and other fringe establishments stood their ground.

### Plants Stick Together

The fringe houses employed only a few machinists, perhaps three, four or half a dozen each out of a total force of several hundred employees in each plant, and could easily have paid the 30 per cent without noticing it. But, with the exception of the breweries and three other individual establishments, all held firm. Of the three plants, one signed up with the union before the strike started, and two others fell by the wayside afterward, out of a total of 15 fringe houses in San Francisco and on the peninsula and eight in the East Bay district.

The new wage scale is \$1.81 for die

and tool makers and machinists in construction work, etc., with \$1.31 for helpers; \$1.64 for maintenance mechanics and \$1.24 for helpers; \$1.51 for journeymen and \$1.14 for helpers; \$1.31 for specialists.

This, which is substantially what the employers offered to grant at the outset of the strike, is an increase of 18 per cent. It puts the San Francisco Bay area on a higher wage level for machinists than elsewhere in the country, but the employers feel that more favorable working conditions and better climate make it possible to absorb the increase and still compete with Seattle, Los Angeles and eastern cities.

All of the fringe issues that the two striking unions fought for were lost, and conditions are practically the same as the 1942 contract except for wages. The unions wanted nine paid holidays, but the agreement stands at six holidays paid, if worked.

Assertions that the international officers of the AFL machinists union broke the strike by instituting a court action which put them in control of the title, books and remaining funds of Lodge 68 are not seriously regarded by employers. They point out that individual machinists were admitting that the strike was lost long before the International Association of Machinists officials came out from the east and started legal proceedings.

Undoubtedly the international officers helped to speed up the final outcome. They

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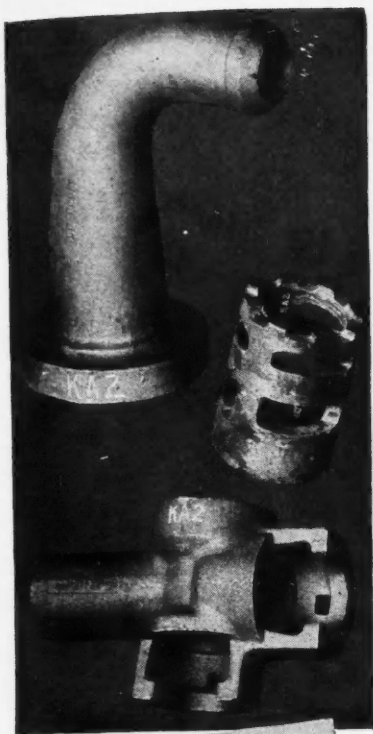


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refused to accept the ordinary union ballot in favor of continuing the strike as a fair test, and insisted on taking a mail ballot which showed just the opposite. Incidentally, this effort within the ranks of labor to throw more protection around the ballot than the ordinary union voting system affords may have set a precedent of great future importance.

#### IAM Still the Union

Although members of Lodge 68 voted on March 17 to secede from the IAM and organize the independent San Francisco Machinists Union, it is generally reported that the workers who came back are taking out IAM cards because they are then in good standing anywhere in the country. The old Lodge 68, which had not been in good standing with IAM for a long time, was organized in 1889, spent \$600,000 of its funds during the strike, and had about \$20,000 left when the strike ended.

Employers report that the men all seem satisfied under the new conditions, and there is greater efficiency and enthusiasm than has prevailed for a long while.

#### Employee Participation Plan in Portland

Fowler Manufacturing Company of Portland, Oregon, has inaugurated an employee participation plan.

Founded in 1914 in Ritzville, Wash., the Fowler Manufacturing Company has been engaged continuously in serving Northwest homes with electric water heaters. Engaged in supplying water heaters for government housing projects during the war, the plant is now geared again for home building production.

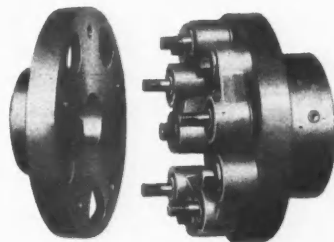
According to Paul L. Fowler, president and founder of the company, a participation fund has been set up for the benefit of all plant workers. In return, employees are expected to perform a fair amount of work and to cooperate with the management in maintaining Fowler's standard of quality.

The plan is simple in operation. For each new water heater leaving the assembly line, 50 cents is put into the fund by the company; for each porcelain range boiler, 15 cents. One per cent of the gross billing of porcelain and painting job work done by the company is added to the above.

In order to promote a high degree of individual workmanship, a deduction system has been made a part of the plan. Any heaters made after April 1, 1946 and replaced without charge, will cost the fund \$1 per heater. Range boilers falling into the same category will cost 30 cents. In no case will any deduction be made from a Fowler employee's wages, which are stated to be at present higher than those in any other West Coast water heater plant. The participation fund operates solely as an "above wage" earning.

At the end of a year, the remaining fund is to be distributed to plant employees on a percentage basis. If the fund amounts to

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\$10,000 and the total payroll is \$200,000, the rate would be five per cent. If an employee's earning for that period totals \$2,000, he would receive five per cent of his wages, or \$100. Thus, since the percentage is flexible, rate and quantity of production would determine whether it was to be five, six or seven per cent.

Rules and regulations covering the plan state that personnel dismissed for cause after April 1, 1946 will not participate. Any employee laid off for reasons beyond his or the company's control will participate up to the time of pay termination. A continuous report of production results, additions to the fund and its payroll percentage is posted weekly on the plant bulletin board.

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# Disabled Vets — A Challenge to Industry

By HERBERT SCHIERENBECK  
Assistant Veterans Employment  
Representative for California  
(As reported in Employment Service Review)

Too much cannot be said of the foresight of corporation executives who had occupational analysts of the USES make a study of job break-down and physical demands. For example, I have in mind a blind veteran, Norman C. He had less than high-school education. But he has been placed in a job turning seams and pockets at 85 cents an hour, plus overtime. Because he turns out more work than two other workers with normal eyesight, the company has asked for another blind veteran. Thus, the successful performance of one blind veteran has opened opportunities for other blind veterans.

### Medical Dischargees

An official of one of our larger corporations in southern California asked for "top" point men. The inference was that he had had very poor results with "medical" dischargees. I asked, "What kind of difficulties?"

He cited several examples which obviously could have been remedied if his shop foreman (a non-veteran) had been given a little kindly advice and told that he did not have to be afraid some veteran would get his job.

He also told me he had in his shop a splendid lad, a disabled veteran, but that he was changing from a cheerful disposition to one of "snapping" at people and sulking. I asked for a chance to meet and talk with the fellow.

His name was Bob O., a former 10th Cavalry sergeant who had been "mussed up" in the Philippines. Yes, he liked the job when he came to work and had intended to work his way up in the corporation, but he watched the "old sourpuss" foreman gradually work the other

veterans out of the shop and felt insecure. This worried him.

It seems that one veteran started to smoke in the plant against orders. The foreman bellowed at him across the floor, "Ditch that cigarette. Can't you read?" It wasn't what he said, but the way he said it. The veteran turned on an indignant heel and said: "Nuts to you!" He threw a handful of steel shavings in the

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machine and walked out. There were other instances of a similar nature.

Thirty minutes later, after talking with the sergeant, and company officials, it was the consensus that Bob was able to "take over" as the shop foreman and that the foreman would be better off some other place in the plant. Bob took over and now has seven disabled veterans working in the shop with him, all apparently content and happy.

The company official is gratified with the amount of work turned out, the low absenteeism, and the "team work" among the men.

#### **Wage Increases In Washington**

Several hourly pay raises, most of them about 18 cents per hour, have been put into effect in Washington State. Both the shipbuilders and the Navy yards have made such increases. Boeing factory workers likewise received that raise in March, retroactive to February 1st. Some threatened strikes, such as the Tacoma city electric utility employees, were settled by pay increases.

In addition, a new minimum wage of 6 cents an hour for women has been ordered effective June 5. The scale is highest in the nation and is 12 1/4 cents above the old rate.

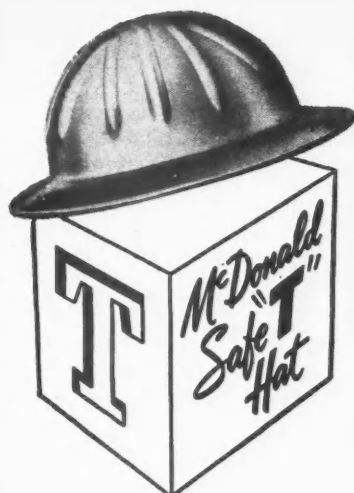
State unemployment compensation claims in Washington quadrupled from mid-October, 1945, to March 1, 1946 (24,000 per week to 100,000 per week). decline has been noted for three successive weeks for the state total. The same holds true for all the important population centers but Tacoma, where claims filed not only held up but continued to increase slightly.

The general decrease in claims is attributed to seasonal increases in employment, principally in agriculture and lumber. Industry has shown no marked bounds upward nor has construction, both being retarded by governmental restrictions, materials scarcity and high costs.

#### **Proof of the Pudding Is in the Eating**

A Montana plant employing about 450 people, faced with cancellation of its insurance contract because of bad accident experience, agreed to a substantial increase in its premium, with a contingent reduction if it could show a satisfactory decline in accidents. A safety program, costing about \$700, was installed, most of the money being spent in educating foremen who were expected to educate the workers in safe practice procedures. At the end of the year the plant received a \$2,500 refund from the insurance carrier.

A Washington plant employing 2,200 people at the peak of the war period had a reduction of \$7,000 in state compensation due to a well organized and maintained accident prevention program.



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# THE WESTERN OUTLOOK...NEWS...STATISTICS...

## THE PICTURE

While the decline in employed workers that had evidenced itself generally in the West during January and February continued into the early part of March, the end of strikes such as that of the machinists in the San Francisco Bay Area resulted in a rise in employment figures during April that was greater than the usual cyclical increase. Though in many lines of production, such as copper, output declined, upturns in such other products as plywood, presaged added activity that is due to be felt generally throughout the West during the coming months, as labor conditions stabilize.

## Employment

Factory employment in California during February declined sharply from the January total principally because of seasonal contractions in the canning field, as well as because of industrial disputes, according to the California Department of Industrial Relations, Division of Labor Statistics and Research.

Most industry groups in the non-durable goods industries, however, added employees between January and February.

### EMPLOYMENT—DURABLE GOODS INDUSTRIES (Figures from Calif. Div. of Labor Statistics)

	San Francisco Bay Area	Los Angeles Indust'l Area	Total State
October 1945	72,100	135,900	259,300
November	35,800	134,700	219,600
December	34,100	138,700	220,100
January 1946	36,100	138,800	222,800
February	33,700	127,800	206,400

## Unemployment—Claims

Major labor markets, coast states and Arizona

	Total Claims	U. S. Employment Service Placements
Dec. 1-15	264,732	20,439
Dec. 16-31	238,934	19,812
Jan. 1-15	321,338	19,308

	Sacramento	San Fran.	San Jose	Stockton
Dec. 1-15	3,233	47,699	4,149	2,763
Dec. 16-31	3,039	47,699	3,995	2,593
Jan. 1-15	5,899	43,791	8,062	4,974

	Los Ang's	San Diego	San Ber'do	Riverside	Phoenix
Dec. 16-31	114,540	13,491	5,869	3,119	3,358
Jan. 1-15	149,172	20,215	7,575	5,128	3,374

	Portland	Seattle	Spokane	Tacoma
Dec. 16-31	17,536	17,131	3,098	5,265
Jan. 1-15	10,837	21,692	5,193	8,121

	Vancouver
Dec. 1-15	5,378
Dec. 16-31	5,447
Jan. 1-15	6,858

## Employment—Eleven Western States

Estimated Number of Employees in Non-Agricultural Establishments—In Thousands—Source: U. S. Bureau of Labor Statistics

### ALL INDUSTRY DIVISIONS

	Montana	Idaho	Wyoming	Colorado	New Mexico	108.8	140	42.7	Total	611	345	2,402	Total
July, 1945	109	93.6	63.9	263	82.9	107.4	144	42.7	907	616	343	2,414	3,373
August	110	92.9	64.7	263	83.1	106.2	144	43.3	907	612	343	2,419	3,374
September	111	96.0	64.7	260	82.9	99.2	139	43.8	907	577	320	2,285	3,182
October	108	94.6	65.7	260	82.4	97.8	136	42.9	888	526	297	2,231	3,054
November	109	95.4	66.4	261	83.1	99.2	136	42.3	892	519	287	2,174	2,980
December	112	96.5	72.4	266	84.3	100.2	136	42.4	910	525	292	2,210	3,027

### MANUFACTURING

	Montana	Idaho	Wyoming	Colorado	New Mexico	17.0	25.1	1.5	129	233	137.9	719	1,000
July, 1945	11.9	15.4	4.4	48.4	4.9	17.0	25.1	1.5	129	233	137.9	719	1,000
August	12.4	14.2	4.4	48.0	5.2	16.1	24.9	1.5	127	224	135.1	720	1,079
September	11.6	15.6	4.2	41.3	5.1	8.9	20.7	1.5	109	186	109.7	588	854
October	10.7	15.1	4.7	43.9	5.3	7.5	19.9	1.5	109	147	86.0	539	772
November	10.5	14.8	5.1	44.5	5.7	8.1	18.6	1.3	109	141	77.7	574	793
December	10.5	13.2	4.6	44.0	6.1	7.6	17.2	1.3	105	137	76.8	587	781

## Warehousing—Percentage of Space Occupied

Figures are based on reports from 634 warehousing firms and are made available by the Bureau of the Census, Dept. of Commerce.

	Mountain and Pacific Division	Idaho	Montana, Utah and Wyoming	Arizona, Nevada and New Mexico	Colorado except Denver	Denver	Washington except Seattle	Seattle	Oregon except Portland	Portland	California except L.A. and S.F.	Los Angeles	San Francisco
October 1945	91.9	96.1	93.4	93.4	57.7	94.9	97.5	94.9	97.3	91.3	90.1	95.5	91.1
November	92.0	94.5	82.1	94.4	58.4	91.9	93.7	94.9	97.3	91.2	88.3	96.4	91.8
December	90.5	94.8	78.4	95.1	59.0	90.6	93.3	95.6	97.3	85.7	84.6	95.9	90.8
January 1946	89.9	95.9	76.1	95.9	59.5	88.3	90.7	96.2	97.3	85.1	80.8	94.9	92.0
February	90.3	95.5	76.5	91.4	77.3	87.8	91.9	97.1	97.3	91.6	80.9	93.7	91.9

## Metal Products—Shipments

Value in thousands of dollars, according to figures furnished by the Bureau of the Census.

	Los Angeles County	San Diego County	CALIFORNIA S.F.-Oakland (Alameda, Con. Costa, Marin, S.F., San Joaquin, San Mateo, Santa Clara counties)	All other counties	Total California	COLORADO	OREGON	WASHINGTON Seattle (King, Kitsap, Pierce, Snohomish counties)	WASH. All other counties	Total Washington	GRAND TOTAL
October 1945	62,173	6,291	54,470	4,770	127,704	6,242	30,271	16,341	37,155	53,496	217,713
November	55,913	5,280	20,170	3,102	82,465	6,036	26,290	16,943	9,275	26,188	140,979
December	52,973	1,768	16,784	2,178	73,703	4,537	8,192	12,915	889	13,804	100,236

## Wholesalers' Sales

According to figures furnished by the Bureau of the Census.  
(in thousands of dollars)

	Automotive Supplies	Drugs and Sundries	Dry Goods	Electrical Goods	Furniture & House Furnishings	Groceries & Food, except Farm Products	General Hardware	TOTAL
OCTOBER 1945								
Mountain	581	1,553	341	865	232	3,707	1,134	10,835
Pacific	1,557	4,098	1,479	3,428	1,038	7,381	2,069	32,728
NOVEMBER								
Mountain	440	1,392	256	982	....	3,984	936	10,794
Pacific	746	....	1,256	3,727	....	9,148	2,894	32,953
DECEMBER								
Mountain	442	1,348	....	1,006	195	1,909	999	7,945
Pacific	622	....	796	4,122	104	9,617	2,236	31,229

## Electric Energy—Produced in the West

Production of Electric Energy for Public Use—In thousands of Kilowatt Hours—Source: Federal Power Commission

	Montana	Idaho	Wyoming	Colorado	New Mexico	Arizona	Utah	Nevada	Total Mtn.	Washington	Oregon	California	Total Pacific
August 1945	192,472	115,684	23,804	96,660	52,503	273,296	29,337	191,899	975,655	748,569	424,015	1,536,701	2,709,285
September	202,026	102,545	22,910	89,288	48,350	269,410	38,043	186,173	958,745	678,808	313,338	1,852,794	2,344,940
October	212,810	97,909	22,101	92,584	45,269	303,842	33,262	212,671	1,020,448	723,393	297,688	1,262,919	2,284,060
November	190,895	106,890	17,194	94,783	46,972	278,731	27,583	206,168	862,437	718,518	285,072	985,017	1,988,607
December	203,005	111,481	17,604	91,236	46,508	264,983	26,858	215,904	878,095	717,510	303,003	1,026,147	2,046,660
January 1946	214,953	103,386	18,062	99,255	42,252	248,064	29,249	247,675	898,099	745,231	304,091	1,032,828	2,082,150
February	189,753	91,733	19,945	86,169	42,985	250,759	29,953	239,069	950,366	668,234	299,660	1,108,091	2,075,985

# FROM THE RESEARCH DIVISION OF WESTERN INDUSTRY

## Freight—Western Traffic

Freight loadings for the four weeks of February declined slightly in the West from the January total, but loads received from Eastern connections rose sufficiently to make a slight increase in the traffic total for the month above that for January.

Total traffic figures for all the major railroad carriers in the eleven Western States from July 1945 through February 1946 are:

	Loadings	Eastern connections	Total
July, 1945	960,556	388,440	1,348,996
August	695,277	450,497	1,145,774
September	595,143	310,868	906,011
October	617,023	313,964	930,987
November	535,620	278,746	814,366
December	586,302	302,807	887,009
Jan. 1946	469,139	240,906	710,045
February	467,054	243,725	710,778

## Oil—On the Coast

Total deliveries of petroleum products in the Pacific Coast territory declined by about 52,000 barrels daily during January from the December figure, according to reports of the U. S. Bureau of Mines.

Total amount delivered by oil companies in the area, including all deliveries to the federal government, offshore shipments, and transportation and other losses, was:

	All Products (Bbls.)	1944	1945
April	954,000	1,148,000	
May	900,000	1,135,000	
June	969,000	1,085,000	
July	884,000	1,011,000	
August	885,000	1,010,000	
September	902,000	954,000	
October	945,000	897,000	
November	992,000	901,000	
December	1,093,969	969,000	
1945	945	1946	
January	1,066,000	917,000	

## Coal—Production of Bituminous and Lignite

Reports by United States Bureau of Mines—(Tons mined)

	Montana	Wyoming	Colorado	New Mexico	Utah	Washington	Other	Total
July 1945	375,000	790,000	500,000	120,000	510,000	95,000	1,000	2,391,000
August	380,000	768,000	556,000	116,000	502,000	108,000	1,000	2,431,000
September	402,000	934,000	643,000	141,000	566,000	117,000	1,000	2,804,000
October	298,000	851,000	598,000	116,000	492,000	111,000	1,000	2,467,000
November	364,000	870,000	557,000	116,000	531,000	124,000	1,000	2,559,000
December	499,000	1,037,000	752,000	116,000	632,000	77,000	1,000	3,143,000
January 1946	425,000	980,000	782,000	130,000	630,000	120,000	1,000	3,068,000

## Flour Production—In Western Mills

According to figures furnished by the Bureau of the Census. (bushels reported)

	WASHINGTON		OREGON		CALIFORNIA		COLORADO		MONTANA		UTAH		IDAHO	
	Mills Report'g	Wheat Ground	Mills Report'g	Wheat Ground	Mills Report'g	Wheat Ground	Mills Report'g	Wheat Ground	Mills Report'g	Wheat Ground	Mills Report'g	Wheat Ground	Mills Report'g	Wheat Ground
August 1945	17	2,503,772	16	1,457,694	10	926,400	18	828,914	15	635,281	20	645,355	15	334,885
October	16	2,738,276	16	1,494,901	9	1,007,319	18	823,209	15	733,818	20	610,239	15	325,990
November	16	2,532,448	15	1,394,070	9	968,513	18	870,823	16	727,244	22	696,828	15	413,227
September	16	2,397,880	16	1,315,306	10	909,779	18	805,434	16	692,826	22	635,587	15	423,639
December	16	2,688,544	15	1,345,888	9	822,032	18	864,160	16	738,156	23	641,053	15	387,744
January 1946	16	2,886,000	15	1,527,000	9	987,000	18	949,000	15	823,000	23	685,000	15	452,000

## Cement—In Barrels

Production of cement during February was 72 per cent higher on the national average than it was in the same month a year ago according to the U. S. Bureau of Mines. Figures for first two months of '46 showed a 61 per cent gain in production and shipments.

PRODUCTION  
(In thousands of barrels)

	—California—		Oregon-Wash.		Utah - Idaho	
	1944	1945	1944	1945	1944	1945
June	1,180	1,439	511	303	249	303
July	1,312	1,538	454	278	245	317
Aug.	1,129	1,491	446	245	291	331
Sept.	1,360	1,364	378	305	280	296
Oct.	1,439	1,431	319	346	299	304
Nov.	1,182	1,211	298	299	280	333
Dec.	1,193	1,174	328	286	249	320
	1945	1946	1945	1946	1945	1946
Jan.	1,258	1,159	269	234	173	233
Feb.	1,191	1,355	243	250	95	109

## Lumber—Cumulative

Production reports for the first nine weeks of 1946 compared with the same period in previous years, and measured in thousands of board feet, are as follows, according to the West Coast Lumbermen's Association:

	9 Weeks 1944	9 Weeks 1945	9 Weeks 1946
Production	1,451,847	1,332,322	968,726
Pct. of 1942-'45 years of production	111.4	102.2	74.3
Orders	1,557,338	1,462,432	947,823
Shipments	1,419,455	1,332,782	972,057

Western White Pine Association figures covering Idaho White Pine, Ponderosa, Sugar Pine and associated species for 1946 through the week ending ————??

	1945	1946
Production	628,237	419,090
Orders	786,171	569,570
Shipments	763,102	544,291

California Redwood Association figures for Redwood lumber through January, 1946 (sawn products M feet BM), are as follows:

	1945	1946
Production	34,535	9,858
Orders	53,795	20,248
Shipments	33,512	11,207

## Soft Plywood—Output

Source: U. S. Bureau of Census (thousands of sq. ft. %)

	Moisture Resistant	Exterior	Total
June 1945	88,928	32,355	121,283
July	60,160	25,419	85,579
August	81,548	32,085	113,633
September	62,459	27,217	89,656
October	41,040	26,422	67,462
November	34,040	24,197	58,237
December	48,831	26,631	75,462
January '46	70,552	36,795	107,347

## Iron and Steel

Pig iron and steel production for the Western area of the United States are reported by the American Iron and Steel Institute in net tons as follows:

	Current Month	Percent of capacity	Year to date	Percent of capacity
Pig Iron:				
June, 1945	141,334	60.6	948,059	67.4
July	141,317	58.8	1,089,356	66.1
August	135,740	56.3	1,225,096	64.9
September	104,190	44.8	1,329,286	62.7
October	105,708	43.9	1,434,994	60.7
November	86,986	37.3	1,521,980	58.6
December	120,498	50.1	1,642,478	57.9
Jan., 1946	83,979	34.9	83,979	34.9
February	40,363	18.6	124,342	27.1

	Current Month	Percent of capacity	Year to date	Percent of capacity
Alloy Steel*:				
June, 1945	4,016	.....	22,426	.....
July	5,688	.....	27,114	.....
August	1,531	.....	29,645	.....
September	4,517	.....	34,162	.....
October	5,966	.....	40,128	.....
November	9,078	.....	49,206	.....
December	4,398	.....	52,348	.....
Jan., 1946	4,463	.....	4,463	.....
February	4,909	.....	9,372	.....

	Current Month	Percent of capacity	Year to date	Percent of capacity
Carbon Ingots, Hot Topped*:				
June, 1945	21,144	.....	273,081	.....
July	9,073	.....	282,154	.....
August	8,204	.....	290,358	.....
September	3,623	.....	295,981	.....
October	8,442	.....	319,095	.....
November	6,049	.....	325,144	.....
December	8,379	.....	333,523	.....
Jan., 1946	3,170	.....	3,170	.....
February	4,317	.....	7,487	.....

	Current Month	Percent of capacity	Year to date	Percent of capacity
Steel Total:				
June, 1945	306,862	71.7	2,333,531	71.8
July	267,468	64.1	2,600,999	81.5
August	255,175	58.3	2,836,174	77.2
September	223,796	53.6	3,059,970	74.8
October	210,866	52.2	3,270,836	72.7
November	218,569	52.5	3,489,405	71.0
December	172,348	41.4	172,348	41.4
Jan., 1946	81,680	21.8	254,028	32.1

## Copper—Mined

Strikes, especially that at Bingham, Utah, were largely responsible for the 25 per cent decline in national copper production in February from the January output, according to the U. S. Bureau of Mines.

In Arizona, however, output fell only 4 per cent in the same period, reflecting a small decrease in the daily production rate.

(Tons produced)

	Arizona	Montana	Utah	Total Western including other states
July, 1945	22,055	6,651	19,826	57,176
August	22,100	6,340	18,478	57,088
September	21,250	4,061	19,177	54,233
October	22,000	7,100	17,900	57,103
November	23,000	6,600	16,000	55,539
December	23,000	5,455	15,300	53,964
Jan. 1946	25,300	6,050	11,000	52,046
February	24,300	5,400	500	38,822

## THE TREND

Recent lifting of ceiling prices on machinery units for industry, as well as for a variety of small retail gadgets, indicates a strong trend towards sharp relaxation of government controls over industry. This, coupled with a decline in the number of strikes, points the way to the beginning of a period of peacetime production marked with the minimum of labor disputes and government troubles. At the same time, mounting figures for unemployment compensation claims indicate that rising industrial activity may be accompanied, for a time at least, by added unemployment.

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## THE WEST ON ITS WAY

### ARIZONA

**MATTRESS FACTORY**—Arizona Furniture and Bedding Co., Kanakake, Ill., has established a new plant at Douglas where it will build fine custom-made furniture, mattresses, box springs and other items for the wholesale trade.

**SUPPLY COMPANY ENLARGES**—The J. E. Redmond Supply Company has announced expansion plans, including a 12,000 sq. ft. warehouse at 400 West Madison Street, Phoenix.

**TWO PACKING COMPANIES INCORPORATE AT PHOENIX**—Articles of incorporation of the Southwestern Packing Company and the Western Packing Company of Phoenix, have been filed. Both corporations have a capital stock of \$500,000. Incorporators of Southwestern are Paul West, Dong Mon Wah, C. Killingsworth, Kin Sui Ong and Poy Ong. Incorporators of Western are C. D. Techenal, Paul West, John Coury, Kin Sui Ong and Dong Mon Wah. Both firms intend to engage in general meats and foodstuffs packing and processing business.

### CALIFORNIA

**WENDT-SONIS INVADES WEST**—Manufacture of cemented carbide cutting tools will be carried out in a new building now in construction at 580 No. Prairie Avenue, Hawthorne, for Wendt-Sonis Co., Hannibal, Mo. Barney E. Robinett is Pacific Division manager, and temporary office is at 316 Elm Avenue, Long Beach.

**OFFICE AND WAREHOUSE PLANNED**—Joseph T. Ryerson & Son, Inc., plans construction of office and warehouse building to contain 100,000 to 150,000 square feet of floor space, and costing 500,000, at Sixty-fifth and Green Streets, Emeryville.

**COLUMBIA STEEL COMPANY PLANS DEEP WATER PORT**—Columbia Steel Company plans \$25,000,000 expansion of company, extending the present plant to tidewater, enabling ocean-going vessels to transport raw materials and unfinished products at Pittsburg. The company will erect new docks with railroad tracks, sidings and other traffic facilities.

**ICE PLANT**—Tracy Ice & Development Company has begun construction of its \$175,000 ice manufacturing and cold storage plant in Tracy. Building will have partially stucco exterior and partially corrugated aluminum.

**SEARS TO BUILD NEW STORE IN S. F.**—Sears-Roebuck & Company plans construction of a \$5,000,000 department store in San Francisco. Site of the new store will be 300,000 square feet of property at northwest corner of Calvary Cemetery, Masonic Avenue and Geary Street. The two-story structure will have a basement department and will provide parking space for 900 cars.

**HAIR OIL CONCERN CHOOSES SAN JOSE**—HQZ Distributors, Inc., manufacturers of hair oil will build a \$75,000 plant on a 2 1/2 acre site purchased at 890 Sunol Street, adjoining Western Pacific tracks, San Jose. Construction is scheduled to start in July. The San Jose plant will replace the main San Francisco plant, and will manufacture liquid shampoo, hair oil and hair luster. The main building, 100 x 104 feet, will be concrete and steel. An office building, 40 x 40, will be of white concrete and glass brick.

**MACHINE SHOPS**—Pacific Can Company, Monta Vista, Santa Clara County is preparing plans for construction of machine shops (100 x 240 feet) with windows on all four sides, and wood trusses, to be built at a cost of \$100,000.

**PLASTIC COMPANY TO BUILD FACTORY**—Sino Electric & Plastic Corp., 1012 Stockton Street, San Francisco, plans construction of a factory building for manufacture of plastic and electrical appliances.

**UNITED-REXALL DRUG COMPANY BREAKS GROUND FOR HEADQUARTERS**—Construction has started on the 200,000 square-foot administration building at La Cienega and Beverly Boulevards, Los Angeles, for the United-Rexall Drug Company.

**CALIFORNIA & HAWAIIAN SUGAR REFINING CORP., LTD. TO L. A.**—Property for ultimate installation of a sugar refinery has been purchased by C & H at Eastern and Randolph Streets, Los Angeles. A distributing station for tank-truck delivery of liquid sugar products will be established temporarily. W. R. Junk is in charge of the plant.

**MCCULLOCH AVIATION COMES WEST**—Coming to Los Angeles from Wisconsin, McCulloch Aviation has temporary quarters at 6101 W. Century Blvd., where it will manufacture aircraft engines and single cylinder industrial engines. The first unit which will be erected immediately will contain 64,000 square feet.



**CONCRETE BATCHER PLANT**—Borchers Bros., building materials and fuel firm, announce a \$70,000 expansion program which includes a new \$50,000 concrete batcher plant and repair shop on a seven-acre tract bounded by Holmes and Sunol Streets and the Los Gatos Creek, San Jose. Headquarters at 396 North First Street will be expanded and improved.

**WELLS, INC., LOCATES AT OAKLAND**—Wells, Inc., major West Coast trucking and contracting firm, has selected Oakland as San Francisco Bay Area headquarters, and has established offices at 608 Sixteenth Street. Robert L. McCorkle, Oakland, is district manager.

**BOTTLING PLANT AT MERCED**—Coca Cola Bottling Company, 905 R Street, Resno, plans construction of stucco bottling plant at 13th and W Streets, Merced, costing \$75,000.

**CANDY FACTORY**—Construction of a two-story and basement reinforced concrete candy factory, 50 x 80 feet, is planned by Douglas Shaw on Ocean Avenue between 19th Avenue and Juniper, San Francisco.

**FIRESTONE FACTORY**—Firestone Tire & Rubber Co. plan construction of a \$140,000 sales building on property on Second Street, San Jose. The new structure will be 40 x 100 feet.

**WARNER PRESS MOVES TO SAN JOSE**—Warner Press, religious publishing house, will build a \$75,000 plant at Stockton Avenue and Clinton Street, San Jose. The plant site has a 121-foot frontage on Stockton Avenue, a 155-foot frontage on Clinton Street and a 97½-foot frontage on Julian Street. Reinforced concrete structure will occupy the entire property.

**NEW FROZEN FOODS OPERATION**—Frozen Cooked Foods Company, 1 Montgomery Street, San Francisco, has begun production of its line of cooked frozen foods with turkey a la king, shrimp and crab cocktails the initial items. The plant is located at 3315 Grand Street, Oakland.

**UNION ICE & STOKLEY-VAN CAMP GET TOGETHER**—Stokley-Van Camp, Inc., plans building a frozen food plant at Oxnard together with Union Ice Company, 211 N. Oxnard Blvd. Plant will be erected on Union Ice property at Williams Farms, American Fruit Growers and Ardenez Farms, with cost estimated at \$300,000.

**MAGNESIUM CLOCK TO BE MADE**—American Gear and Engineering Co., 150 West San Fernando Street, San Jose, schedules production of its Magna Time Clock shortly. The clock will be constructed almost entirely of magnesium.

**MERCHANDISING MART ADDITION CONTRACT AWARDED**—The contract has been awarded for the \$1,800,000 addition to the Merchandise Mart in San Francisco. Addition will be of reinforced concrete and structural steel, with nine stories and basement addition, and will add 250,000 square feet of floor space.

**R & K INDUSTRIAL PRODUCTS COMPANY BEGINS MANUFACTURE**—Manufacture of rubber goods has begun in the new factory of R & K Industrial Products Company, 1945 North Seventh Street, San Pablo. Products include wheels, mounted on rubber tires and rubber mouldings for cars, refrigerators and household appliances.

**ROMA WINE WAREHOUSE**—The contract has been awarded for the \$350,000 storage warehouse 200 x 640 feet, for the Roma Wine Company, Church and East Avenues, Fresno. Warehouse will have 20 loading doors and a special conveyor system.

**INDUSTRIAL BUILDING**—Julius Harband plans construction of a two-story and mezzanine, class C industrial building 75 x 113.4 ft. in area, on West Ninth Street between Mission and Howard Streets, San Francisco. It will have concrete exterior walls, concrete columns and beams and girders, with wood joist floors.



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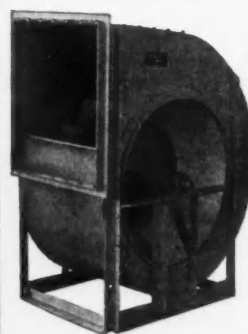


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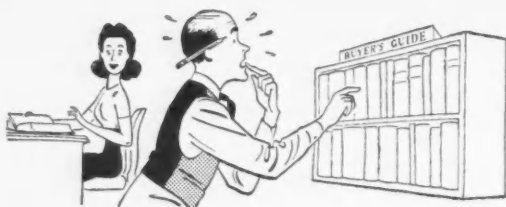
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## THE WEST ON ITS WAY

**NEW INDUSTRIES IN LOS ANGELES AND WHAT THEY DO**—Shelby Bicycle Co. of California, 560 E. Commercial St., Pomona, will assemble 200 bicycles daily from parts made at Shelby, Ohio; Nolan Paper Box Co., 2419 S. Grand Avenue, purchaser of C. W. Hering Co., will manufacture paper boxes; Moto-Sway Corp., 205 Pasadena, will manufacture service station and garage equipment; Peerless Album Co., 5523 E. Slauson Ave., began manufacture of phonograph record albums April 1; Atlantic Varnish Co., 4827 N. Huntington Drive, will make protective coatings; Pacific Gage Co., 2449 E. 56th Street, is constructing a building at 6503 Avalon Blvd. where it will make plug and ring gages beginning June 1; Pierson Electronic Corp., 533 E. Fifth Street, has begun production of communication and commercial radio equipment; E. C. Heard Co., 2105 S. San Pedro Street, has begun manufacture of photographic equipment; Volk Mfg. Co., 1903 W. Pico Blvd., has started production of smoking pipes; Morrow Engineering Co., 1132 E. Firestone Blvd., is manufacturing grinders and other machine tools; Frank Mack, 1454 N. Spring Street, has begun production of wheels, dies, tools, precision instruments and stampings; Lawson Time, Inc., 123 Montecito Street, Sierra Madre, plans production shortly of clocks for home and office desk use; S. & K. Chrome Furniture Co., 200 S. San Pedro Street, Los Angeles, has begun manufacture of metal furniture; Savage-California Co., 4328 San Fernando Road, Glendale, is making gift items such as lamps, brass and copper plant containers; Silverchrome Electro Plating Co., 3682 S. Main Street, has begun operations; California Venetian Blind Co., 733 Stanford Avenue, is manufacturing wood and steel Venetian blinds; Cinema Sportswear Mfg. Co., 144 W. Eighteenth Street, will soon be making men's sport shirts; Seaboard Sales & Mfg. Co., 2343½ W. 20th Street, has started manufacture of lamp shades; and True Tone Speaker Co., 1822 Georgia Street, is manufacturing public address speakers and guitar amplifiers.

**AND STILL THEY GROW**—Industrial expansions in Los Angeles include: Planned expenditure of \$1,600,000 by Norris Stamping & Mfg. Co., 5215 S. Boyle, will go for additional facilities; Gladding McBean & Co., 2901 Los Feliz Blvd., plans a million dollar expansion including enlarging fine china, earthenware, and floor and wall tile departments; Neil's Flavor Laboratory, 11201 W. Pico Blvd., to make food flavorings for baking, ice cream and confectionery trade; L. H. Butcher Co., 3628 E. Olympic Blvd., to manufacture agricultural in-

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secticides and wholesale chemicals; California Associated Products Co., 3631 Union Pacific Ave., in new plant where it will make Monterey grape juice punch, flavoring extracts, etc.; Standard Cabinet Works, Inc., 1800 E. Washington Blvd., is constructing a 30,000 sq. ft. addition for increased production of store, office and bank fixtures; Wolf Range & Mfg. Co., 2116 E. Olympic Blvd., is remodeling its building at 3731 S. Alameda Street, which it will use for manufacture of heavy duty commercial gas cooking equipment; Harris Furniture Co.'s new address is 401 E. 54th Street, where it will manufacture upholstered living room furniture;

**L. A. LIKE TOPSY**—L. B. Laboratories, Inc., 8428 Melrose Avenue, plans construction of a plant on San Vicente Blvd., West Hollywood, for production of hair oil, pomade, permanent wave oil, etc.; Bobrick Mfg. Corp., 2619 Santa Fe Ave., has under construction a building at Rich and Blake Streets where it will make liquid, lather and powdered soap dispensers; Gross Mfg. Co., San Gabriel, is erecting a plant at 1711 California Ave., Monrovia, to contain 17,000 square feet, to increase manufacture of automobile accessories; The Trimmer Co., 6720 Victoria Avenue, is utilizing its new quarters for manufacture of power lawn mowers; Jansen Shoe Co., 7406 Melrose Ave., is constructing a plant on Burbank Blvd., near Vineland, North Hollywood, for manufacture of women's and children's house slippers; Dillingham Printing Co., Inc., 4837 Huntington Drive, is erecting a building adjoining present plant to increase production of tickets, coupon books, strip tickets, as well as general printing;

**MORE LOS ANGELES EXPANSIONS**—Marinco Steel Fabricators, formerly of Alhambra, has acquired land at 1023 Chico Ave., El Monte, where it will erect a 10,000 sq. ft. bldg.; Metal Fabricators, Inc., 814 N. Broadway, has begun construction of a 9,600 square-foot building at 2971 Partridge Ave., for sheet metal work; Exacto Industries, 466 S. Robertson Blvd., has increased space for manufacture of aircraft clips, clamps, hose clamps, etc.; Pioneer Chemical Co., 619 E. Third Street, has acquired adjoining building for production of sanitary compounds; Royal Mfg. Co., Ltd., 5066 Alhambra Ave., has acquired more space for manufacture of power brakes for trucks and trailers by moving to above address; Axelson Mfg. Co., 6160 S. Boyle Avenue, has purchased the plant erected during the war on its property by the RFC and will make deep well plunger pumps, iron castings and machine tools.

**FRUEHAUF TRAILER TO BUILD NEW PLANT**—A 71-acre site has been purchased for \$130,000 at Pomona, for location of a new West Coast factory to be built by the Fruehauf company when conditions permit. The Pomona plant will be wholly apart from and in addition to the present plant in Los Angeles, and will carry out the plan of decentralization together with expansion. Company expansion of Los Angeles will add 50,000 square feet.

**SHELL CHEMICAL TO EXPAND RESEARCH LAB**—A capital expenditure of more than \$3,500,000 is involved in expansion of Shell Development Company's research laboratories at Emeryville. Three major new buildings will be constructed and present facilities will be extensively remodeled. Largest of the new buildings will be an eight-story structure with basement which is designed primarily to house the research laboratories. Of steel and concrete construction it will be built in the form of a square with ventilation ducts and elevators in the center and laboratory space around the perimeter. All buildings will be equipped with fluorescent lighting, central heating and ventilation. It will be extensively sound-proofed throughout.

**TERVEN PRODUCTS BEGINS OPERATIONS** — Terven Products Co., Salinas, has begun operations in canning carrots in its new \$150,000 streamlined plant. Research department has been set up to explore possibilities of utilization of by-products (tops, crowns and culls).

**SKY FREIGHT SERVICE**—Pacific Coast headquarters of Consolidated Sky-Van, Inc., have been established at Oakland. The company will operate 10 round trip flights a month over the Oakland-New York airway, carrying Alameda county and Northern California produce to eastern markets and returning with cargoes of machinery and wearing apparel.

**GENERAL MILLS' SPERRY FLOUR DIVISION EXPANSION**—Two California plants, one at Lodi and one at Los Angeles, will be built by the Sperry Flour division of General Mills, Inc. The Lodi plant will be a new cereal plant for packaged food products, and the L.A. plant will have a modern flour mill and elevator. Construction of both projects will be started as soon as materials become available. The L.A. plant will be extremely modern.

**PRODUCTION STARTS**—Production of the Earthmaster two-wheel and four-wheel tractors has begun at the Aerco Corp. plant at 12024 Center Street, Hollydale, Calif. Company plans production of several other models of tractors and its Aero Molasses Applicator is already on the market. Concern recently purchased an additional tract of land which will be used for manufacturing purposes. Its precisionbuilt division is now producing a complete line of fishing reels and accessories.

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**GUGGENHIME & COMPANY TAKEN OVER BY HUNT FOODS**—Hunt Foods, Inc., Los Angeles, has exercised a purchase option approved by stockholders of Guggenlime & Co., San Francisco, dried fruit packer. The purchase which becomes effective June 1, marks entrance of the Hunt concern into the dried fruit field for the first time. It is expected that the Guggenlime company will continue under present management, operating as the Guggenlime & Co. division of Hunt Foods. J. D. Vellis is president of the Guggenlime concern.

**NEW WAREHOUSE**—California Aggregates Co. has started construction of a warehousing and ready-mix concrete plant for handling of complete line of bldg. materials, at Linden Ave. and San Bruno Road in South San Francisco. Plant will be in operation within 60 days. P. H. Tyrrell, formerly operator of Golden West Quarry, will be mgr. Bob Wilkins will handle retail sales.

**P.G.&E. PLANS EXPANSION IN SANTA ROSA**—Pacific Gas & Electric Co. plans to spend \$1,752,000 in enlarging and extending its distribution facilities in Santa Rosa and other Sonoma County communities. A new step-down substation will be built at Fulton at a cost of \$778,000, and construction of the Fulton-Winters 110,000-volt transmission line will cost \$870,000. Cost of a switching station at Winters is estimated at \$104,000.

**HARBOR PLANS FOR SAN FRANCISCO**—The Board of State Harbor Commissioners plans a \$1,000,000 pier for fishing industry to provide berthing facilities and refrigerating and packing plants to be constructed at the foot of Hyde Street; modernization and enlargement of grain terminals at Piers 90 and 92 to cost another million. Grain operators will share construction costs jointly with the Harbor Board. Piers 25 and 27 will be rebuilt at a cost of \$3,500,000 for purpose of handling cargo. Work has begun on the \$5,000,000 Mission Rock pier which will provide 7,000 feet of additional dock space and a repair program is proceeding for Piers 7, 9, and 21.

**UNITED AIRLINES MAIN BASE TO BE SAN FRANCISCO**—The chief maintenance and overhaul base of United Air Lines will be established at the San Francisco Airport, according to W. A. Patterson, president of United. Development will provide jobs for an estimated 800 skilled technicians before the end of 1946 and a total of 6000 jobs before the end of 1955.

**SIERRA CANDY CO. DOUBLES FLOOR SPACE**—A four-story factory building at Broadway and Front Streets, San Francisco, has been purchased for \$300,000 by Sierra Candy Company, of which Theodore A. White is president. Another \$100,000 will be spent for the most modern candy-making machinery and revamping the building. It will give the company 90,000 square feet of floor space served by railroad spur in the heart of the wholesale district.

**NATIONAL IRON WORKS EXPANDS**—The Barth Foundry & Machine Co., San Diego firm, has been acquired by National Iron Works, San Diego. All machines and equipment as well as key personnel will be transferred to National's new plant in the south bay area. Supt. of the new plant is Earl F. Kenner, sole owner of Barth the past two years. Company specializes in building of Southern California fishing craft.

**GENERAL ELECTRIC COMPANY BREAKS GROUND**—Initial construction has started on the glyptal alkyd resin plant at Anaheim to be used by General Electric Company in manufacture of glyptal alkyd resins for paint bases. The chemical plants division of Blaw-Knox Company, Pittsburgh, designed the plant and is constructing it at a cost exceeding \$500,000.

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## COLORADO

**CRESSON GOLD MINE REOPENS**—The Cresson gold mine at Cripple Creek, opened April 1. Work has begun on cleaning up levels in the mine, shafts have been retimbered. Mine has produced 46 million dollars in gold in its history.

**CALIFORNIA COMPANY PLANS PIPELINE**—A 10-inch pipeline from the Rangely oil field in northwestern Colorado to California at a cost of between \$8,000,000 and \$10,000,000 is tentatively planned by the California Co. The company is a subsidiary of Standard Oil Company of California. The proposed line would be 735 miles long and require 10 pumping stations. It would give the field outlets from coast to coast. The field is now serviced by a 10-inch line of the Utah Oil Refining Co. Oil can be moved to Salt Lake City or to Chicago or south from Guernsey, Wyo., to Cheyenne and Denver.

**GALBREATH TIE & LUMBER COMPANY SOLD**—Denver Wood Products Company has purchased the Galbreath Tie & Lumber Company, South Fork, Colo. The concern started business in 1898.

**SPRINGS BASE SLATED FOR NEW ROLE**—Headquarters of the strategic air command, one of the three major combat commands, will be established in Colorado Springs. Peterson Field will be headquarters.

**CARTER OIL TAKES BIG LEASE**—Some 15,000 acres of land for immediate drilling 15 miles north of Craig, Colo., have been leased by the Carter Oil Company. The company hopes to tap the Weber producing sand of the Rangely Field.

**CF & I REOPENS LIME QUARRIES**—Quarries owned by the Colorado Fuel & Iron Corp. are being reopened, and a new addition has been built on the crushing and loading plant on the property. Work is progressing to get the machinery into operation. Railroad workers are repairing the D&RGW tracks. The quarries have been closed since 1930.

**ATCHISON, TOPEKA & SANTA FE AIDS INDUSTRY**—Some 60 acres of land between West First and Third Avenues, along Platte River Drive, in Denver, have been purchased by the Atchison, Topeka & Santa Fe Railway as sites for new industrial plants. Plants that will be built on the site include an \$800,000 investment by Denver Auto Dealers, Inc., for storing new autos for all Denver dealers, with an extensive service department in connection; a large wholesale and retail distributing company plans construction of a building to use 35,000 to 40,000 square feet for storage, distributing and shipping departments; the Flexicore Company, an eastern manufacturing corp., will construct an independent new factory branch at a cost of \$50,000. The railway company has invested \$350,000 of its funds to promote industrial growth.

Other sites purchased by the Santa Fe include 30 acres between Cliff and Yale Avenues, Denver. There an eastern auto parts manufacturing company will construct a factory with 100,000 square feet of floor space, and plans to ship 500 carloads of raw materials and finished products a year and employ 350 high-class mechanics. The Bursen Company, maker of auto heaters, is erecting a \$50,000 plant between Evans and Warren avenues on South Delaware. Sherco Metal Products Company, manufacturers of playground equipment, plans construction of a \$50,000 plant; Ralph Goldberg, aluminum window sash manufacturer, plans a \$40,000 plant; Knox Glass Company, Knox, Pa., contemplates construction of a glass bottle manufacturing plant in South Denver area.

## IDAHO

**CANNING FACILITIES TO BE ADDED**—Preparations for adding to cannery facilities, installing a commercial ice plant and a quick-freeze unit, are being made at the J. R. Simplot plant at Caldwell. Ice equipment will produce 90 tons a day and concern is preparing storage for 12,000 tons. Storage facilities will handle two million pounds of frozen food and plant will quick freeze four tons of fruits or vegetables an hour. The lumber company is turning out commercial boxes and lumber, doing planing and has a contract for a million ironing board tops. Far from closing down its dried potato output, the company has an order for 100,000,000 pounds of dry cull potatoes to be used in the production of whiskey. It represents some 900,000,000 pounds of wet potatoes.

**STEEL FABRICATORS START BUSINESS**—Western Steel Manufacturing Company, Boise, will construct a cinder block factory to house its fabricating plant. The company, just formed, is composed of Roy Norquist, president, and C. F. Tileston, v.p. Both were associated with Olson Manufacturing Co.

**CLEARWATER VALLEY LIGHT EXPANSION PLANNED**—Four-year electric expansion program which includes addition of nearly 800 miles of single phase line in six northern Idaho and two eastern Washington counties, is planned by the Clearwater Valley Light and Power Association, Lewiston.



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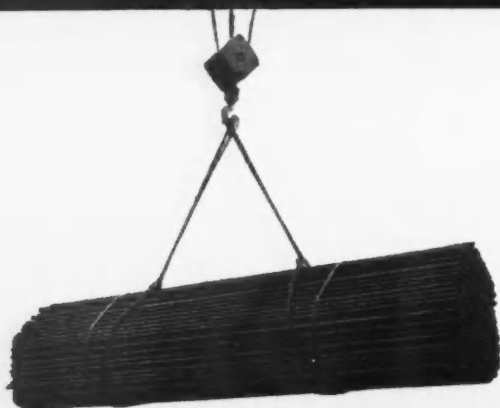
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## THE WEST ON ITS WAY

### MONTANA

**NEW AIRLINE COMPANY**—A new airline—Great Northern Airlines—has been set-up at Great Falls. The company plans establishment of an air route from Chicago to Seattle-Tacoma. Great Falls will be headquarters of the new concern, which will bring air service to communities not now provided air transport, serving more towns in a 24-hour period than any air system established today, C. K. Moore, secretary of the firm, claims. Ed Klies of Great Falls is president of the new airline.

**PETROLEUM PLANT TO REOPEN**—The Aronow refinery of The Unity Petroleum Corp. will reopen shortly at Kalispell. The plant has been closed during the war. The company will make the same products as before, gas, fuel oil and road oils. It will employ 20 men on its regular crew.

**CABINET WORKS INCORPORATED**—Foley's Mill and Cabinet Works, Helena, has filed articles with authorized capitalization of \$150,000 with the secretary of state. Incorporators are Michael F. Foley, Erling Richardson and Paul T. Keller.

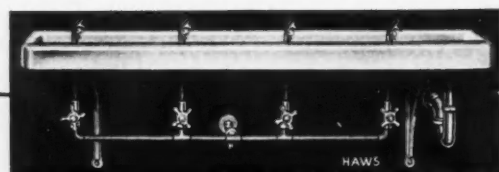
**FISH MEAL COMPANY ORGANIZED**—The Montana Fish Meal & Oil Corp., Great Falls, which will process fish for meal, bone products, fertilizer, and will refine oil for wholesale and retail sale, has been incorporated. V. F. Luhrs, Mack J. Hamilton and Earl E. Botsford are directors. Corporation was authorized to issue 60 shares of 6 per cent cumulative stock at \$500 each and 50,000 shares of common stock without par value.

**HELENA NATIONAL FOREST TIMBER SOLD**—A sale of 1 1/3 million board feet of national forest saw timber has been made to J. L. Buffington on Shingle Mill creek north of Avon. Buffington will saw lumber and mine timbers to be used in the Avon vicinity.

### NEVADA

**U. S. VANADIUM PLANS FULL-SCALE OPERATION**—Operation of a tungsten concentrate processing plant in a portion of the Basic Magnesium, Inc., plant at Henderson by the U. S. Vanadium Corp. will begin by July 1. The bulk of scheelite concentrate for the Henderson plant comes from the newly-enlarged concentrator at the Riley mine in the Potosi district, Humboldt county. Initial chemical beneficiation of concentrates for the company will be done at Henderson. Company plans to use substantial quantities of materials now being produced by Stauffer Chemical and Hardesty Chemical companies, operating in the Basic plant.

**BASIC METALS PLANT CONSTRUCTION BEGUN**—A huge plant for recovery of quicksilver in Columbia dry lake is now under construction on property near Columbus owned by Basic Metals, Inc., Los Angeles. Company is installing Diesel engine and generator, trommels and copper-lined cylinder 16 feet high and 20 inches in diameter. Water will be forced into a pool in the dry lake bed, the semiliquid material elevated to tanks in the plant and run through a series of trommels to the electrically charged cylinder. Heavy voltage is expected to strip oxidized coating from globules of mercury and precipitate the metal on the cylinder walls, from where it will drip to the bottom and be drawn off into flasks. Plant is designed to treat 100 tons of material daily. Operations are expected by the management to start in June.



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## NEW MEXICO

**WEAVING FIRM ORGANIZED**—The Rio Grande Weavers, Inc., of Santa Fe, has been capitalized for \$50,000. Lucille Chase, Alice E. Chase, Evelyn Stark and Felix Mares are incorporators.

**PUMICE MANUFACTURING CO. FORMED**—The Pumice Manufacturing Co., Inc., of Albuquerque, has been incorporated for \$75,000. Incorporators are E. D. Glasco, F. W. Heaton, E. E. Ribble, R. E. Cramer and Ray W. Isom.

**SOUTHWEST PLANS LIVESTOCK EXCHANGE BUILDING**—Early construction of a \$350,000 livestock exchange building in downtown Albuquerque is planned by the Albuquerque Production Credit Association. The seven-story building is designed to house businesses engaged in livestock growing and will serve the livestock industry. Frontage of the building will be 100 by 142. Building is eight stories high. A basement garage will store 50 cars.

**THREE NEW MEXICO CONCERNS**—Charters have been granted to Southwest Mining and Milling Company of Albuquerque, \$50,000 capital stock authorized, incorporators including Earl Eichelberger, Charles J. Coy Jr. and M. Ralph Brown; the Ward Anderson Printing Company of Albuquerque, \$100,000 capital stock authorized, and incorporators are Thomas G. Summers, Robert L. Summers, J. M. Barber and John R. Wilhite; and Foreign Traders, Inc., of Santa Fe, with \$200,000 capital stock authorized, with \$100,000 issued at the start of business, incorporators are Antonio J. Taylor, Marianna V. Taylor and Wayne L. Mauzy.

## OREGON

**PLANT VOTED BY CO-OPERATIVE**—The Grange Co-operative Association, Medford, plans construction of a feed manufacturing plant with storage facilities to cost \$85,000. Plant will be completed in time for fall grain crops.

**HARRIS PINE MILLS**—Immediate construction of a furniture factory to cost between \$60,000 and \$70,000, at Pendleton, is planned by the Harris Pine Mills, a box manufacturing concern.

**QUAKER OATS PLANT FOR PORTLAND**—Quaker Oats Company will enter Portland area with plant to produce breakfast foods, cereal products and animal feeds. The company has acquired the Kerr-Gifford elevators, near Swan Island, together with adjacent vacant land from Union Pacific Railroad. A modern plant, costing some \$2,000,000, will be erected sometime in 1947. Operation will employ about 500 persons.

**NEW CONCERNS AT PORTLAND INCLUDE:** B & G Mfg. Co., 5012 N.E. 42nd Avenue, manufacturing oil burners; Builders Wood Products, Inc., S.E. 17th and Spokane streets, producing cabinets, sash and doors; Connoisseur Wineries, N.W. Vaughan Street, new manufacturing and bottling plant, 100 x 150 ft.; C & S Photo Equipment Co., 4529 S.E. 67th Avenue, manufacturing and repairing photo equipment; Exact Scale Models, Inc., 4215 N. Vancouver Avenue, producing models for railroad equipment; Inland Motor Freight Co., 20th and N.W. Vaughan, new \$100,000 motor freight terminal;

Cornelius W. Meyers & Associates, S.W. Front and Montgomery, producing equipment for logging and construction industry; Moulded Logging Co., 8141 N.E. Union Avenue, sheet metal fabrication; National Manufacturing Co., Vanport, Ore., producing water-conditioning equipment; Nelson Plastic Co., 118 S.W. Washington Street, Portland, producing fishing tackle; Northwest Plastic Co., 6042 S.E. Division Street, producing lamps and novelties; Pacific Sheet Metal Works, 3500 S.E. Hawthorne Avenue, sheet metal fabrication; Portland Products Co., S.E. Taggart and Seventh Avenue, new 100 x 100 ft. one story plant, costing \$60,000;

Smithwick Concrete Products Corp., 1750 N.E. Lombard, producing concrete blocks; Vaughan Motor Co., 2440 S.E. Raymond, \$75,000 plant under construction; Western Boat Co., 886 N.E. 47th Avenue, producing pleasure boats, cruisers, etc.; White Satin Dairy & Products Company, 401 N.W. 13th Avenue, processing poultry; and Western Insulated Products Co., St. Helens, Ore., manufacturing impregnated building siding from Fir-Tex base material.

**PORTLAND INDUSTRIAL ESTABLISHMENTS EXPANSION**—General Tool Co., N.W. 15th and Flanders, is expanding its plant and remodeling at a cost of \$50,000; Ken R. Humke Company, 207 N.W. 14th Avenue, is remodeling and expanding, cost \$50,000; Pacific Garment Co., S.W. Fifth and Ankeny, is remodeling building for factory, cost \$60,000.

**PLYWOOD PLANT NOW IN OPERATION**—The Umpqua Plywood Corporation's plywood manufacturing plant in Douglas county, is now in operation. It is equipped for a monthly production of 3,000,000 feet of 3/8 inch material. The corporation has purchased some 65,000,000 feet of timber to supplement raw material supplies and to assure it of adequate supply of high quality veneers for panels.

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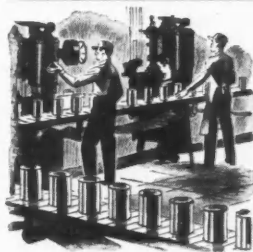
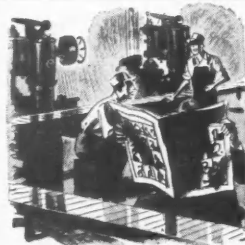
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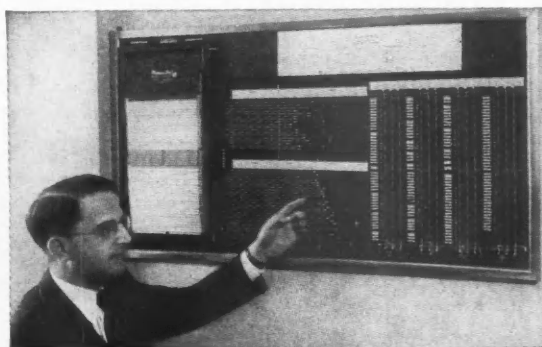
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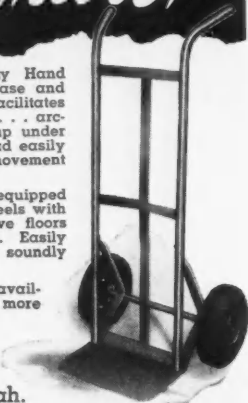


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Spokane, Washington

## THE WEST ON ITS WAY

### UTAH

**NEW PLASTICS PLANT**—Nisley, Inc., a new plastics molding concern, will open in Spanish Fork in the near future. Concern will do work in plastics molding, electro-plating and fabricating of plastics. Custom molding will be done for other companies in addition to manufacture of proprietary items. Factory will be 30 x 100 ft., and some 150 workers will be employed at peak production.

**UTAH CHEMICAL & OIL ASPHALT TO BEGIN**—The only asphalt treating plant of its kind in the world, the Utah Chemical & Oil Asphalt Processing Co. is preparing to begin operations at Vernal, 180 miles east of Salt Lake. The plant is located on the north slope of Asphalt Ridge, five miles southwest of Vernal. Initial plant capacity will be 50 tons a day, but when entire plant is completed it will process up to 500 tons a day. From four to six industries will be required to finish the processed material for market. Grover Kilhorney is supt. of plant.

**SALT LAKE CITY TO GET ASSEMBLY PLANT**—Lightweight aluminum trailers will be assembled at an assembly plant to be established by Brown Industries at Salt Lake City. Company plans to establish assembly plants at Los Angeles, Denver, Seattle and Portland. Thorburn C. Brown is gen. mgr. of the Spokane firm.

**POWER FIRM TO SPEND \$150,000**—Telluride Power Company will expend \$150,000 for power system expansion and betterments in the Richfield area. Among facilities now in construction stage are a new 1500 KW substation at Richfield; new substation and switching facilities at Milford; automatic oil circuit breakers in the 44,000 and 7,200 volt lines at Beaver and new 44,000 volt transmission in Beaver Canyon; reconstruction work at Fillmore and Richfield, and new service shop and warehouse at Richfield.

### WASHINGTON

**PLASTICS PLANT BEGINS IN SEATTLE**—Coast Plastics, Inc., a new Seattle firm, has begun production of fabricated plastics products. W. C. Fields, recently Boeing chief resident engineer in charge of tooling, is production manager; John P. Kinzer is pres.; C. P. Keeble, process unit chief at Boeing, is v.p. and gen. mgr., and George E. Hughes, head of plastics engineering at Boeing, is sec.-treas.

**POWDERED METAL PLANT FOR WEST**—Tacoma Powdered Metals Co. plans immediate construction of its first manufacturing unit to cost \$500,000, at Tacoma. It will produce powdered iron by a new process to be sold largely in the East. Plant will utilize low cost power, hydrogen, hydrochloric acid and scrap steel. Frank Eichelberger is pres. and Jacob Schoder is v.p. Plant will be only producer of powdered iron in West.

**UNITED FOODS BUILDING LARGE PLANT**—United Foods, Inc. has begun construction of a 122 x 182 ft. modern factory building on South 35th Street, Tacoma, which it expects to have in operation before May 1, producing potato chips and popcorn. Plant will have continuous potato chip frier with sufficient space for a second unit. Popcorn equipment will occupy adjacent space. Concern is affiliated with Nalley's Inc. Plant will be equipped with three large air conditioned rooms for storage of potatoes and corn.

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SHEETS UP TO 60"

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**KENWORTH TRUCKS NOW BEING BUILT**—Kenworth Motor Truck Corporation is in its new Seattle plant on Marginal Way, and production of its trucks has begun. The factory purchased by Kenworth last fall for more than half a million dollars, occupies more than four of the 15 acres of plant property. Building was formerly the Fisher Body Plant and was utilized as Boeing Plant 3 during war. In the new plant Kenworth's truck and bus business is consolidated with Pacific Car and Foundry Company's school bus and coach body business.

**NATIONAL DISTRIBUTION**—Columbia Electric & Manufacturing Company, Spokane, are producing three new postwar items on a royalty basis from patents of Spokane inventors, and have attained national distribution on them. They are a stoker shovel, a mail box and a pipe threader. Columbia have also resumed manufacture of their prewar products, floor lamps and electrical fixtures, and are employing about 100 people, three times their prewar payroll. As soon as materials are available, they expect to employ 150 to 175 people.

**SUGAR REFINERY**—Utah-Idaho Sugar Company have plans to build a new sugar refinery at Sunnyside, Washington, when conditions are stabilized. It will be larger than the company's Toppenish mill, near Yakima, and will have a capacity of from 2,000 to 2,500 tons of beets a day.

**FIVE MILLION DOLLAR BUILDING FOR SEATTLE**—Frederick & Nelson, Seattle division of Marshall Field & Co., will be completely rejuvenated under a \$5-million building and modernization program recently announced. Several stories will be added to the present five as well as modernization of existing floors. Escalators, elevators, new lighting and ventilating systems, are included in the expenditure. Project will be divided into two phases, with work to start soon on the first \$2,000,000 phase, which will take about two years to complete. The second phase probably will begin in 1948.

**WOOD FLOUR MANUFACTURING PLANT**—Construction of the \$150,000 wood-flour manufacturing plant of the Specialty Woods Products, Inc., at Spokane has begun. Production plans provide for shipment of six cars of wood flour a week to eastern plastic manufacturers. Flour is principal ingredient in production of plastics.

**EDMONDS SHIPYARD TO BUILD TRAILERS**—Highway and logging trailers will be built by the Pointer-Willamette Co. at the Edmonds Shipyards. The company has taken a five-year lease on the property, and has an option for additional five-year lease on waterfront site, which has approximately 500 feet of frontage. Trailers to be manufactured will be of steel. Company is building trailers, installing cab guards and subframes. Nilo Lambe is plant superintendent and Walt Wilson is shop foreman.

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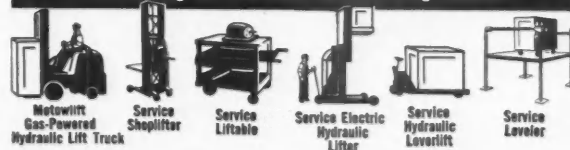
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9. **Long Blade:** 11' 5" long. Never heats. Most economical length in buy.
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## THE WEST ON ITS WAY

**INCORPORATION**—Charles Cullen Company, Seattle, has filed incorporation papers. Company lists occupation as manufacturing business, and is capitalized at \$50,000. Charles C. Cullen, Second floor, Medical Dental Building, Seattle, is one of incorporators.

**NEW PHONE BUILDING STARTED AT SEATTLE**—Construction has started on the \$125,000 two-story and basement fireproof addition to the district branch building of the Pacific Telephone & Telegraph Company, 1506 Seventeenth Avenue, Seattle. The structure of brick exterior and terra cotta trim, will be 107 by 42 feet in ground area.

**REPUBLIC SEABEE MAY COME TO VANCOUVER**—Tex Rankin, West coast manager for Republic Seabee airplanes, announced recently that the company may occupy a plant adjoining the Vancouver airfield at the foot of East Reserve Street, for its West Coast sub-assembly plant. The plant would employ about 100 skilled aircraft workers. Location at the Vancouver airport where Rankin has been demonstrating his new Ercope, may also mean establishment of offices and parts warehouse for distribution of Seabee and Ercope throughout Northwest territory.

**HERSHEY PACKING TO ADD TO FREEZING PLANT**—Hershey Packing Company plans a freezing plant addition at Snohomish which will cost an estimated \$120,000. The addition will be 70 x 100 feet and will give existing processing plant a food freezing capacity of approximately 2,000 tons a year.

**PACIFIC POWER & LIGHT COMPANY**—The Pacific Power and Light Company plus expenditure of \$100,000 in the Walla Walla district in addition to \$46,000 worth of new rural and urban distribution lines. The company's distribution substation in Walla Walla will be rebuilt and new equipment will be put in service.

**CRANBERRY CANNERY**—A cranberry plant, to replace the former Cranberry Cannery, Inc., cannery which burned at Markham in 1942, is planned by the company. It will be double the size and capacity of the former operations, and have a capacity of 1000 barrels a day.

**NEW DESIGNING FIRM**—Design Research, Inc., 1516 Second Avenue, Seattle, has begun operations. Company will assist Pacific Northwest manufacturers in all phases of product design and styling. New firm consists of six persons who formerly were employed in tooling and production illustration at Boeing Aircraft Co.

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for Industrial Trucks



When equipped with Ready-Power units, the performance of electric trucks is improved 25% to 50%. Ready-Power units replace storage batteries and provide a continuous source of electric power.



All the convenience and easy handling characteristics of electric trucks are retained and improved. There are no slow downs . . . "down time" is eliminated. Thus, your electric trucks give peak performance 24 hours of every day in the year. Convert your electric trucks to Ready-Power. Specify Ready-Power on new truck purchases.

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**COLUMBIA CONCRETE PIPE EXPANDS OPERATIONS**—A \$90,000 addition to the Columbia Concrete Pipe Company's plant at Wenatchee to house a concrete block-making machine is planned. Work will begin with building of a spur track from Great Northern main line within the next month or so. Building will be made of concrete blocks.

**FISHERMEN BUY BALLARD PLANT**—The Ballard Marine Railway has been purchased by Bernard Hanson and a large group of fishermen who plan a co-operative operation. O. W. Granquist has been made manager of new organization. A co-operative store at the plant will supply units of the Seattle fishing fleet.

**BOTTLING PLANT FOR TACOMA**—Cammarano Brothers plan construction of a two-story building, 50 x 150 feet, to house the firm's sales dept. When completed and when sugar is available, plant capacity will be increased to more than a million cases a year.

**ROYAL CROWN TO BUILD PLANT**—Construction is expected to start shortly on the \$75,000 bottling plant for the Royal Crown Cola Company, Walla Walla.

**BUDD INLET GETS GO AHEAD**—The War Shipping Administration has approved an area near Olympia as suitable for mooring surplus ships. The WSA has set up an office to hire men to moor and repair ships which will be on display to prospective buyers.

## WYOMING

**UNITED AIR LINES MOVES TO CHEYENNE**—The Denver repair plant of United Air Lines will be moved to Cheyenne by July 1. It will be consolidated with the Cheyenne base. When removal to San Francisco is complete Cheyenne will be main educational unit for UAL.

**ENGINEERING WORK STARTED ON CASPER PLANT**—Engineering work is in progress for the Casper plant of the Standard Oil Company (Ind.) which will lead to the construction of a catalytic cracking unit, vapor recovery and polymerization facilities.

**PACIFIC WESTERN ENTERS WYOMING OIL FIELD**—The Pacific Western Oil Corporation has purchased from the Frontier Refining Company 60 per cent of an operating agreement for development of oil lands south of Worland, Wyo. Pacific Western will conduct field work of exploring for oil and gas and developing and producing.



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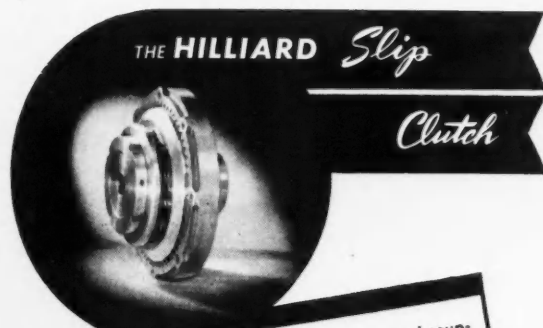
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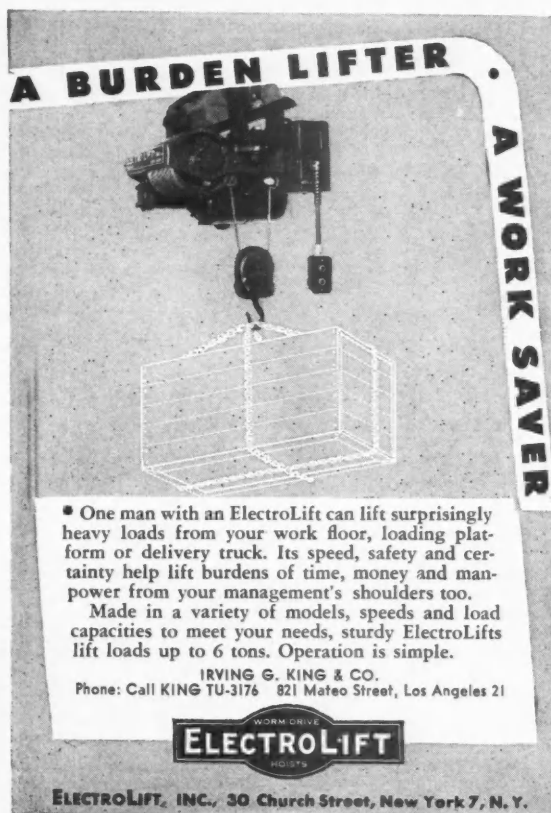
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# WESTERN TRADE WINDS

NEWS ABOUT THOSE WHO DISTRIBUTE AND  
SELL INDUSTRIAL EQUIPMENT AND MATERIALS

Alexander Black, formerly with Pacific Lighting Corporation of Los Angeles, and recently released by the Army Air Corps as Lt. Col., has joined the sales department of Solar Aircraft Company and will work with the petroleum industry branch.



Carl Havens

Carl Havens has been named assistant to W. A. Blees, vice president in charge of sales for Consolidated Vultee Aircraft Corporation. Havens will supervise Convair advertising, sales promotion and public relations, and will make his headquarters in the company's general offices at San Diego.

Wellwood E. Beall heads the new engineering-sales organization of Boeing Aircraft Company. Beall was recently named vice-president in charge of both engineering and sales. Assisting him are: Chief Engineer Edward C. Wells, Sales Manager Fred B. Collins and Service Manager Robert A. Crawford. E. E. "Al" Miller is assistant sales manager; Kenneth C. Gordon is chief sales engineer; Frank R. Canney handles the market analysis section; Harold B. Kohr is in charge of the spare parts section, and Cecil Gholson will handle customer relations.



P. E. Forsythe

Paul E. Forsythe has been appointed special assistant to S. L. Crawshaw, manager of engineering and sales, Western Gear Works and Pacific Gear & Tool Works. He comes from Webster-Brinkley Company where he was manager of engineering and sales department. He will be headquartered in Seattle.

W. R. Ferguson, for many years with the Bank of America, and for the past several years associated in the exporting and importing business, announces the opening of general offices at 206 South Spring Street, Los Angeles, where he will continue in the exporting and importing business under the firm name, W. R. Ferguson Company.



W. R. Ferguson

Plans are being formulated by Robert A. Trumpis, national pres. of American Society of Industrial Engineers, and partner in firm of Trumpis-Collar and Associates, Industrial Engineer consultants, for development of an engineering "clinic" building which will house industrial engineering specialists of all types under one roof and operating under "guaranteed" performance contracts. Building design has been selected, and project may get into operation by July of this year.

Ryan Aeronautical Company, San Diego, has created a new stainless steel manufacturing division. In addition to aircraft exhaust systems, parts for jet propulsion engines and allied accessories, a number of non-aeronautical products of stainless steel which fit the facilities and technique of this division have been developed. Joseph A. Small has been appointed assistant sales manager of the exhaust manifold department.



T. E. Colvin



J. J. Gardner

J. J. Gardner has been appointed sales manager of domestic and foreign sales for Aerco Corporation, Hollydale, Calif., and assumed duties February 15. Mr. Gardner, who will supervise sales of farm equipment and attachments, comes to his new position with 28 years' experience with the J. I. Case Company where he was in charge of Pacific Southwest Sales. Timothy E. Colvin is president of Aerco.

The J. E. Redmond Supply Company, successor to the J. E. Redmond Company, Phoenix, has been incorporated for \$200,000, and will service electrical needs from a power plant to the smallest home. The new business will occupy 12,000 square feet of warehouse and office space at 400 West Madison Street, Phoenix. J. E. Redmond is president, and James T. Deppe, secretary-treasurer.

Paul V. Miles has been appointed Western manager of the Justrite Manufacturing Company of Chicago and is located in San Francisco with temporary quarters at 1085 Monadnock Building.

Joseph B. Peebles, until recently general manager of Gladding McBean Company's central division, has been made sales manager of the Stran-Steel Division of Kraftile Company, Niles, Calif. Mr. Peebles will report to James Crawford, vice-pres., who has been promoted to the post of general sales manager.

David Ladd has been promoted to Pacific Coast manager of the Powers Regulator Company, with offices at 1808 W. Eighth Street, Los Angeles. He replaces the late S. W. Matlon.

Major Glenn Smith has resumed his peacetime duties as district manager of the Los Angeles office of Lyon Metal Products, Inc. He was on active duty with the chemical warfare branch in Europe.



Maj. Glenn Smith

C. H. Ehrenberg, former asst. manager of the industrial department of the Seattle Chamber of Commerce, is general manager of Sales and Export Co., with headquarters in the L. C. Smith Building, Seattle. Company is a universal distributing concern for general merchandise. Lee A. Glass is sales manager and S. M. Hess is manager of export department.

Ford, Bacon & Davis, Inc., engineers, has reopened its Western office in charge of Page Goslan, vice president, in the Hollingsworth Building, 606 South Hill Street, Los Angeles.

Philip F. Shepherd, formerly with Shell Chemical Company, Pittsburg, Calif., and just separated from Naval service with the rank of Lt. Comdr, has joined Ellinwood Industries, Los Angeles, as director of sales, marine equipment division.

National Electric Products Corp., Pittsburgh, has opened a new sales office for the Oregon territory at 1231 N.W. Hoyt Street, Portland 9, which will be managed by J. Harley Sroufe, for the past three years manager of the Seattle office.

E. C. Van Horn, who served as commander in the Navy as engineer and repair officer at the United States Naval Station, Seattle, has joined Kenworth Motor Truck Corporation as manager of the enlarged service parts department. Formerly a Kenworth employee, he was among the original group who were with the company in its initial stages of organization.

Ronald T. Strong, who served as captain in the Navy with the amphibious forces, has rejoined Westinghouse Electric Corporation as manager of its San Diego office. He served 15 years with Westinghouse at Seattle, San Francisco and San Diego before being recalled to active duty in January, 1941.

William B. Kennedy, formerly commercial engineer for Sylvania Electric Products, Inc., in Salem, Mass., has been appointed Pacific Coast field engineer. Mr. Kennedy joined Sylvania Electric in 1944.

Jerry Lipke who served as lieutenant colonel during the War, will represent Hall Laboratories in Denver, upon completion of a "refresher" course. He will work with the Denver Fire Clay Company and the Hall St. Louis office.

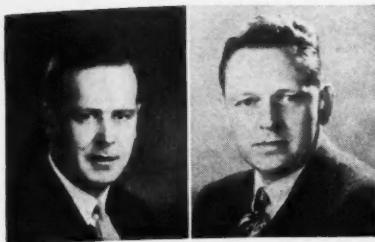
Willis H. Stevens, a former executive of the Weyerhaeuser Timber Co., has joined Roberts Motor Company, Portland, as a field expert. His territory will cover Oregon and Washington.

Jack Carlson is the new district sales manager of Kaiser Company's Iron and Steel Division, Seattle, Wash. The new office at 307 Hoge Building will complement existing sales facilities at Portland, Ore., and will serve the Northwest with products from the Fontana plant. He was formerly with Inland Steel Company.



Jack Carlson





R. G. Scoggins  
Jones & Laughlin Steel Corp.  
W. S. Wainright  
Jones & Laughlin Steel Corp.

R. G. Scoggins has been appointed district sales manager in Los Angeles and W. S. Wainright has been appointed to the same post in San Francisco by the Jones & Laughlin Steel Corp., Pittsburgh. Mr. Scoggins joined J & L in 1938 but has been located in the East. He succeeds T. C. Bell who has been made special sales representative in L. A. Mr. Wainright has been located in Pittsburgh, and has been with the concern since 1936.



Carroll Agrelius

Carroll Agrelius has been promoted to regional manager of Kelite Products, Inc., and will take charge of the newly reorganized Salt Lake City area, overseeing sales in Utah, Idaho and parts of Colorado and Nevada. Mr. Agrelius goes to Salt Lake City from Los Angeles where he was a Kelite service engineer.

G. E. Troutman has been promoted to division sales manager, Rocky Mountain Division, Colorado Fuel & Iron Corp., Denver. Troutman, with CF&I since 1932, was formerly assistant division sales manager.

C. Plin Mears, a former partner and sales manager of E. C. Buehrer Associates of San Francisco, has been appointed sales manager of the industrial truck division of Salsbury Motors, Inc. Mears has been in the industrial truck materials handling field for some time. Salsbury Motors is chief subsidiary of Northrop Aircraft, Inc., and manufacturer of the Salsbury Turret Truck.



C. Plin Mears

Herbert G. Sandberg has joined the firm of Harold C. Brooks, Inc., manufacturers' representatives and food brokers. Mr. Sandberg comes to his new post from the California Quartermaster Depot where as procurement specialist he bought canned foods for all branches of the services.

Western Asbestos Company is again handling Reynolds Metal Insulation. The office will service the building industry in northern California and western Nevada. Two types of Reyno-met are obtainable: type "B" with foil mounted on both sides of heavy kraft paper, and type "C" with foil mounted on one side.

C. E. Smoot, Jr., has returned from service with the Marines to his position as manager of the Seattle branch of the Smoot-Holman Co., Western lighting equipment manufacturers, at 209 Seneca Street.

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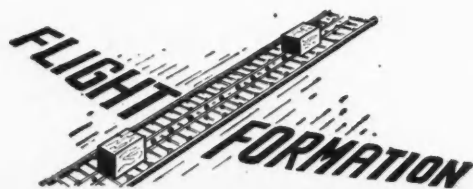
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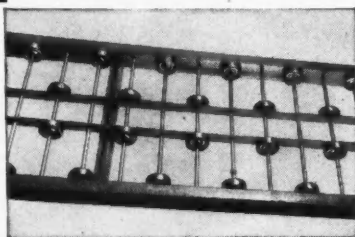
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The model shown here is equipped with a chemical cartridge that neutralizes paint spray and light organic vapors and acid gases. An additional felt filter is provided to be used where dust and vapors exist simultaneously.

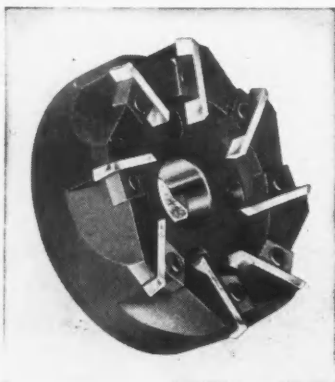
• Many other models and types available . . . write for descriptive literature . . . No obligation

**Sharpe**  
**MANUFACTURING COMPANY**  
1224 Wall Street  
LOS ANGELES 15, CALIFORNIA  
Prospect 4368

# THE SHOWCASE

388

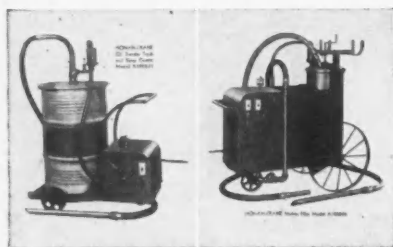
**Universal Face Mill**—A precision built heat treated steel body or tool holder, with a set of detachable solid Kennametal blades mechanically



held in position, is announced. Five standard sizes available, 4 inches, 6 inches, 8 inches, 10 inches and 12 inches in diameter. Blades for these are of the same cross section, and when shortened by regrinding, can be used in smaller cutters successively. They are formed at both ends, and can be used in either right or left hand cutters. When blades are dulled they may be removed from the body or tool holder while it remains on the spindle, and sharpened on a standard surface grinder by a diamond wheel. Grinding a matter of minutes. Resetting equally simple. *Kennametal Inc., Latrobe, Pa.*

389

**Complete Line of Sump Cleaners and Coolant Filters**—Sump cleaners and coolant filters have been added to the line of Honan-Crane Corporation. The two items illustrated are the Transfer Truck & Sump Cleaner and the Mobile Coolant Filter. The Transfer Truck & Sump Cleaner is designed for quick, convenient removal of dirty oil, dirt, chips, sludges, scale, etc., from sumps or tanks of machine tools, gear



cases, compressors, engines and quenching systems, and can also be used as an oil dispenser.

The Mobile Coolant Filter is designed to remove, filter and replace oils or coolants used in machine tool operations, extracting oil chips, dirt and abrasives as rapidly as they are liberated by the operating equipment. Company also makes a "Centri-Power" Coolant Filter and a Sump Cleaner. Complete details and specifications on four units or other equipment: *Honan-Crane Corp., Lebanon, Indiana.*

390

**Floating Piston**—The new Gerotor 4-Way Hydraulic Valve has a "floating piston" design that provides a new high in valve operating efficiency and ease of operation. The design per-

mits close fitting of the piston in the valve bore and gives maximum sealing ability. Valve stem is supported in its bearings in the valve covers without any influence on the piston fit in the valve body. Offered with four types of action: standard, spring return, spring centered and ball detent; five piston designs; six types of operation, hand, foot, cam, solenoid, oil pressure and air pressure operated; seven sizes ranging from 1/4" to 1 1/2". *Gerotor May Corporation, Logansport, Ind.*

391

**New Masonry Cutting Blade**—A new abrasive masonry cutting blade in its exclusive "jade" color claims superiority over ordinary black abrasive blades. Claimed for it are: Long-



er life, lowest cost per cut, quick cutting, a blade to cut every type of masonry efficiently, and elimination of operator eye-strain because of its safety "jade" color. Available in 12-inch and 14-inch sizes to fit any type masonry cutting saw. Blades are equipped with blotters for safety in operation and steel centers for efficient operation and protection of machine shaft. Complete details and prices. *Dept. XX, The Champion Mfg. Co., St. Louis, Mo.*

392

**Neoprene Work Glove**—Safety red, warning a worker when his hands are dangerously near moving machinery, is a feature of the Stanzoil neoprene-coated canvas glove, designed and

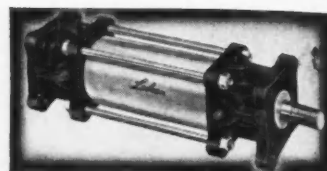


made for industrial use by the Pioneer Rubber Company. Made of milled neoprene, which provides a tougher coating for greater resistance to abrasion and other wear hazards, the gloves

are oil and acid resistant. Curved fingers give greater comfort and make gripping tools and other objects easier. Manufactured in one standard size, but two wrist styles, knit and gauntlet. *The Pioneer Rubber Company, Willard, O.*

393

**Standardized Cylinder**—A completely standardized cylinder, manufactured in quantities and available off the shelf in an assortment of diameters and stroke lengths, is announced. Will operate by air, oil, or water and lends itself to al-



most universal mounting applications. Cylinders are designed to give long life and maximum freedom from trouble and repair. Bulletin 453 available. *Engineering Products Company, Los Angeles, Calif.*

394

**New Portable Arc Welder**—A new, small portable electric welder, sold under the trade name Zipper-et, has been announced by Mid-States Equipment Corp., also makers of a portable power saw and file which is propelled by electricity, air or flexible shaft. The new welder is recommended especially for light duty welding and general maintenance and for the home-workshop. Operates on 110 volt A.C. current. Transformer in case is burn-out-proofed, with spun-glass insulation. Primary and secondary winding separate, with no electrical connection between them. Five-year guarantee against burn-out. *Mid-States Equipment Corp., Chicago 16, Ill.*

395

**Boiler Water Testing Cabinet**—An improved and simplified testing cabinet for testing boiler water to determine its condition and the required application of Magic Boiler Preservative



to prevent scale and corrosion in boilers, has been developed. All materials needed for controlling Magic Boiler Preservative in marine, industrial and locomotive boilers are in cabinet shown. *Garratt-Callaban Co., of Calif., San Francisco 5, Calif.*

# YOURS FOR THE ASKING

1948

**Possibilities for Bay Area Industries**—Publication of the first comprehensive survey of San Francisco Bay Region industrial location factors in over 15 years is announced by the San Francisco Chamber of Commerce. Produced at a cost of over \$20,000 and published in three colors, the 38-page brochure is profusely illustrated with photographs, maps, charts, graphs, and diagrams. Survey shows advantage of the 12 county area for small as well as large plants, and includes details on environment, geography, transportation, materials, markets, labor, sites and buildings, power and fuel, water, capital and credit, taxes, and waste disposal and drainage. Fifteen charts, 11 maps, 13 tables and over a hundred photographs are included in the brochure. *San Francisco Chamber of Commerce, San Francisco, Calif.*

1949

**Department of Labor Publications**—Three booklets on industrial statistics are now available. The three which fit together present, first, a Nation-wide index of wage rates in key occupations so that manufacturers and labor unions may have data for planning wage scales for new occupations and products; second, a detailed job analysis which makes an effort to introduce a more realistic approach to the so-called journeyman occupation, and to develop flexible combinations of work elements to take account of interplant variations in duties of workers in the same occupation in the metal working classification; and third, a detailed analysis of the underlying elements of the wage structure in the machinery industry during 1945. All are Nation-wide in scope. Titles: Occupational Wage Relationships, Series 1, No. 1, Machinery,

1945; Industry Wage Study, Appendix A, Job Descriptions for Wage Studies, Metalworking; and Wage Structure, Series 2, No. 1, Machinery, 1945. *U. S. Department of Labor, Bureau of Labor Statistics, Washington, D. C.*

1950

**Plant Movies Available**—A movie produced by Clark Equipment Co. is available. Has interesting close-ups of several out-of-the-ordinary manufacturing operations with specially designed machinery. Engineering instructors in leading technical schools are using it in their classes. Usually operations pictured include the several steps in making a one-piece forged axle housing from a single plate formed into a tube; silent blind riveting—from one side only; modern method of mechanized material handling by means of Clark fork lift trucks and industrial tractors; twisting high speed drills into spiral form from forged blanks and many others. For use of film write *Clark Equipment Company, Buchanan, Mich.*

1951

**Victor Flames**—A dramatic booklet of the intricate welding industry is now available. Booklet depicts the uses of flame from the practices of the Stone Age down to the huge amazing machines that today cut and join metals. Much of the booklet is in color, many photographs are included illustrating various steps in development of welding. Members of the Victor company are pictured. *Victor Equipment Company, San Francisco, Calif.*

1952

**Metalsorter**—Literature now available on a new portable metalsorter which quickly sorts

and identifies pure metals, steels and non-ferrous alloys. It sorts several pieces per minute, is reliable, easy to operate and non-destructive, and the electronic timing control provides for uniformity. *Control Equipment Company, Pittsburgh, Penna.*

1953

**Corrosion of Steels**—A 15-page booklet treating with corrosion of steels, comparison of corrosion resistance of copper steels and of irons and plain carbon steels, corrosion resistance of cor-ten and other low-alloy, high-strength steels relative to that of copper or carbon steels, non-metallic coating as preventive of corrosion of steels, with partial bibliography is obtainable. Prepared by Dr. John Johnston, director, research laboratory, U. S. Steel Corp. of Delaware. Available from *Columbia Steel Company, San Francisco.*

1954

**New Line of Audio Amplifiers**—Now in production at Newcomb Audio Products Co. is a new line of audio amplifiers, pre-amplifiers and accessories, described as superior even to past products. Two distinct series featured: The K-Series deluxe models, with plastic, keylock control cover; volume and overload indicator, and H-Series standard models, designed for applications where lower cost must be considered. Features are described in a new 24-page catalog. Included are actual response and distortion curves based on tests of completed amplifiers. *Newcomb Audio Products Co., Los Angeles 7, Calif.*

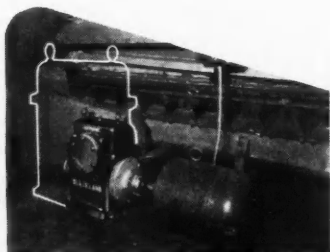
1955

**Heim Unibal Spherical Bearings**—A new catalog (No. 10) describes Heim Unibal Spherical Bearings and Rod End Bearings and is available through Edward D. Maltby Company, distributors in Southern California and Arizona. Much useful engineering data is set forth in the catalog.

(Continued on page 102)

**SPEEDAIRE**

... Saves \$742



As the white outline indicates, a standard unit of approximately twice the frame size would be required to do Speedaire's work.

A MICHIGAN company needed nine speed reducers for conveyor drives in the new foundry. Various types were studied; costs estimated; capacities figured; advantages compared. Speedaire was selected.

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It's easy to find out how much you can save with Speedaire. Catalog 300 shows you how to quickly figure proper size Speedaires for your equipment. Send for your copy. The Cleveland Worm & Gear Company, 3269 East 80th St., Cleveland 4, Ohio.

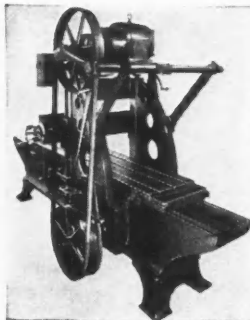
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**ELECTRIC COMPANY**  
INDUSTRIAL EQUIPMENT DIV. — DAYTON, O.



1956

**Men of Vision**—A booklet devoted to men in research and engineering, this 32-page booklet profusely illustrated, points to the major role played by research and engineering experts in the development of "Caterpillar" products. The booklet traces development of different machinery, the diesel engine, and many others. Form 9282. *Caterpillar Tractor Co., Peoria 8, Ill.*

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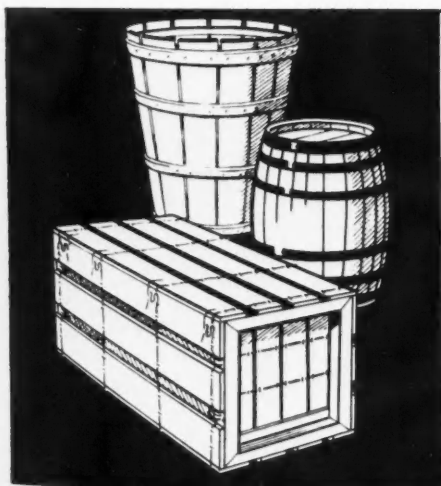
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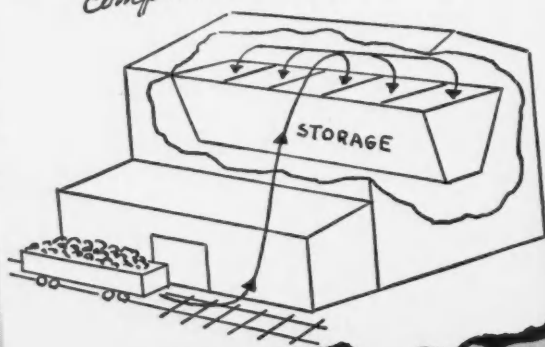
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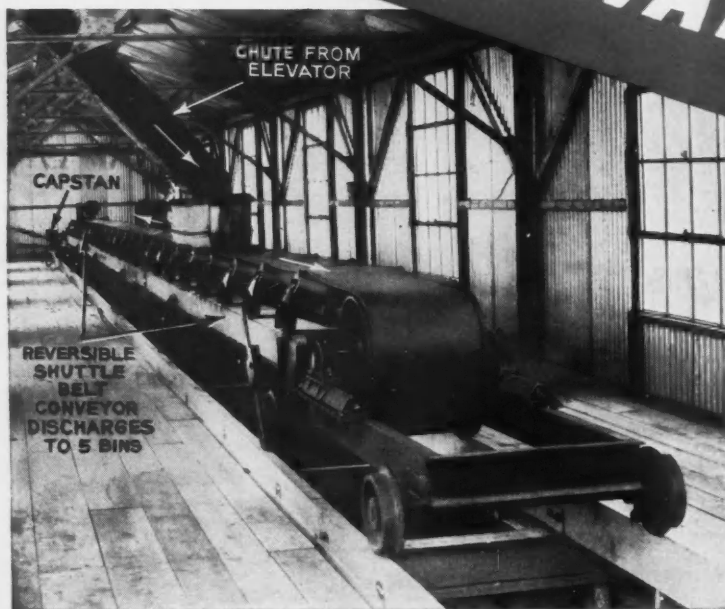
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Upper view shows Power Shovel and Track Hopper, together with Bucket Elevator, from which material is chuted into storage gallery.

Lower view shows inside of storage gallery, showing Shuttle Belt Conveyor which receives materials from chute, and moves back and forth over each bin compartment, distributing material into desired bins.

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